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## DIESEL RAILWAY TRACTION SUPPLEMENT

The May issue of THE RAILWAY GAZETTE Supplement, illustrating and describing developments in Diesel Railway Traction, is now ready, price 1s.

## GOODS FOR EXPORT

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this paper should not be taken as indicating that they are available for export.

## NOTICE TO SUBSCRIBERS

Consequent on further paper rationing, new subscribers cannot be accepted until further notice. Any applications will be put on a waiting list which will be dealt with in rotation in replacement of subscribers who do not renew their subscriptions.

## POSTING "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE possesses the necessary permit and facilities for such dispatch.

We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas.

## REDUCTION IN SIZE OF PAGE

To economise in paper our readers will observe a slight reduction in the size of THE RAILWAY GAZETTE in that the size of the page has been reduced from 9 in. x 12 in. to 8½ in. x 11½ in. The type area of the page remains the same, namely, 7 in. x 10 in., but the surrounding margins have been reduced. This of course detracts from the appearance of the paper, but is one of the exigencies of the war.

## TO CALLERS AND TELEPHONERS

Until further notice our office hours are:  
Mondays to Fridays 9.30 a.m. till 5.30 p.m.  
The office is closed on Saturdays

## ERRORS, PAPER, AND PRINTING

Owing to shortage of staff and altered printing arrangements due to the war, and less time available for proof reading, we ask our readers' indulgence for typographical and other errors they may observe from time to time, also for poorer paper and printing compared with pre-war standards.

## Political Interference

IT is inevitable in wartime that political interference in industrial and commercial matters should increase and in the present struggle there can be no doubt that not only has the dominion of the bureaucrat assumed dimensions never before attained, but that political action has been more and more bent towards interference in matters which should be judged on other than political grounds. For a good many years the railway industry of this country has been a centre of political controversy and this has not slackened since the assumption of control of the railways by the Government. It is possible, indeed, that the fact that the railways are under the control of the Government at the present time makes it easier for those who wield the familiar weapons of politics to achieve changes which they wish to have introduced. If one felt any assurance that the "reforms" which it has sometimes been sought to impose on the railways were put forward in the interests of the community as a whole, no exception, of course, could be taken to them in principle, even if it was deemed that they were ill-founded on a practical aspect. It is inherent, however, in interference which is inspired by political motives that it is a sectional rather than a national interest which is the basis.

## A Case in Point

At the present time there is evidence of a movement to secure the withdrawal of restaurant cars on railways throughout the country. Already instructions have been given by the Minister of War Transport which have resulted in a very substantial curtailment of refreshment facilities on the railways, and one would have imagined that the desirability of extending the ban of this kind could best be judged by those who are in the closest touch with the daily operation of the lines, and who are in a position to know what the effects would be of a further reduction in any given class of amenity offered by the railways. On long-distance passenger trains there can be no doubt that a total withdrawal of refreshment facilities would involve a very real hardship on those who are forced to travel without compensating advantages in other directions. Any extra space for travellers which might be made available by the withdrawal of refreshment cars would be small, and the stock itself if taken out of service would have to be accommodated in yards where it would occupy room which could otherwise be put to more useful purposes. In some political circles there seems to be a tendency to interpret equality of sacrifice in terms of the greatest discomfort for the greatest number, and not to bother too much as to whether in achieving that end any practical advantages accrue.

## The Phillimore Railway Collection Sold

The suggestion we made at page 450 of our April 10 issue to the effect that an effort might be made to expend the relatively small total sum involved in buying the whole, or the major portion, of the Phillimore Railway Collection so as to preserve it as part of an eventual national museum, apparently created a considerable amount of interest and brought forth a good deal of support among those interested in railway history. In a letter to *The Times* Mr. Frank E. Box also advanced the view that these famous early railway relics should be acquired either by the nation or by the railway companies. The sale by auction by Messrs. Sotheby & Company was due to be held on Tuesday last, April 28, and we had hoped this week to be able to record that arrangements for national preservation had been successfully achieved. It is an open secret that the four main-line railways did in fact confer with the object of bidding for the whole or part of the collection, but events ordained otherwise, for Messrs. Sotheby & Company announced on April 22 that the collection had been sold privately during the day and that the auction would not take place. For the present the purchaser prefers to preserve his anonymity,

but it is an open secret that he is a dealer. He has given no hint as to whether he intends to hold the collection for some eventual more public purpose; or retain it for subsequent sale (either as a collection or by breaking it up) in more propitious circumstances than those obtaining at the present time.

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### Overseas Railway Traffics

The increase of 560,000 pesos in receipts shown by the Buenos Ayres Great Southern Railway in the 41st and 42nd weeks of the financial year contrasts with the decreases recorded for that period by the three other principal Argentine railways for that period, namely the 721,350 pesos of the Central Argentine, the 334,000 pesos of the Buenos Ayres & Pacific, and the 101,000 pesos of the Buenos Ayres Western. On the other hand, the Entre Rios has for the two weeks an increase of 208,300 pesos, and the Argentine North Eastern one of 152,200 pesos. For the year to date the aggregate advance on the Entre Rios is 1,796,400 pesos, and on the Argentine North Eastern it is 1,220,600 pesos. The Central Uruguay shows for the 42 weeks of the financial year an increase of £91,131 in sterling, and \$709,166 in currency.

	No. of week	Weekly traffics	Inc. or decrease	Aggregate traffic	Inc. or decrease
Buenos Ayres & Pacific*	42nd	1,665	-45	60,471	-892
Buenos Ayres Great Southern*	42nd	2,655	366	102,699	9,868
Buenos Ayres Western*	42nd	827	91	35,774	3,682
Central Argentine*	42nd	1,718	344	7,681	6,985
Canadian Pacific	15th	898,600	£	129,000	13,330,600
			£	2,759,400	£

\* Traffic returns in thousands of pesos.

On the United of Havana the traffic increase for the 42 weeks is £246,421, and that of the Great Western of Brazil for the first 16 weeks of 1942 is £1,800.

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### Streamline Economics

Notwithstanding the rapidity with which new streamline trains have been introduced in the United States during the past five years, the building of new units by American railway companies has seldom been a merely speculative venture. If a streamline train does no more than draw traffic from other less attractive trains over the same route it may, by making the operation of the latter less profitable or definitely unprofitable, indirectly prove more of a liability than an asset; that is to say, creation of new traffic is essential to justify streamline enterprise. The New York Central System has now made public the calculations on which it based the decision to build the 32 streamline cars which have recently gone into service on the Empire State Express between New York, Buffalo, and Detroit. Each of the two trains travels 654 miles daily, and the two between them make a total of 477,621 miles in the year; on a mileage basis the New York Central estimates that it will need an additional 51.8 cents a mile daily in the gross earnings of the trains to justify the expenditure involved. To attain this increase, an average of 29 further coach passengers or 17 additional parlour car passengers, or a proportionate combination of both, is needed on every journey, and these not allured from other trains, but entirely new business. To ascertain if this aim is being realised, a detailed analysis of ticket sales is being made, and it is unfortunate that war conditions and restrictions on road travel, which are greatly increasing railway passenger business, will tend to falsify what otherwise would have been a very efficient study of the value of new passenger trains.

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### Canadian Pacific Railway a Butcher

Although the Canadian Pacific Railway is known to include many and varied types of business within its organisation, few associate it with the slaughtering of cattle for meat. Nevertheless, almost half the meat eaten in the city of Montreal is slaughtered in the premises of Eastern Abattoirs Limited, a C.P.R. subsidiary company with plant near the Angus shops. The company neither buys nor sells meat, and

the functions of the Eastern Public Cattle Market are simply to provide a central place for the reception of livestock brought into the city, and a point where cattle owners and wholesale butchers can meet and bargain. Eastern Abattoirs Limited maintains a plant where live animals are efficiently turned into meat and by-products under Government supervision. As indicative of the volume of business handled, it may be recorded that last year 151,738 animals passed through the stock yards, and 153,207 were slaughtered in the abattoir. The latter figure comprised 21,340 cattle, 6,252 sheep, 32,554 calves, and 93,061 hogs. The entry of the C.P.R. into this peculiar branch of railway business was the result of unusual conditions which existed in the meat industry some years ago. Before the turn of the century, the company brought livestock to the market by rail. This was in the days when the meat supply was uncertain and many small firms operated questionable slaughter houses independent of government inspection. In 1901 the city wanted someone to lease the market and assume responsibility for its operation, and eventually the company did so in 1902. The property was bought outright by the company in 1908 and was known as the Eastern Public Cattle Market. Large sums of money had already been spent for maintenance and improvement, and larger amounts have been expended since. The abattoirs were closed for a time after several years of unprofitable operation and were taken over and operated by the company, as a public service, in 1921. This property was purchased outright from the Montreal Abattoirs Company in September, 1925, and has been operated by a subsidiary company ever since.

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### The Young Idea

A good many years ago British railways came to realise that there was a great deal to be gained by extending their propagandist efforts to the younger generation, and thus training up the juniors in the way that they should go—by train. The Great Western Railway was probably the first to take the matter seriously in hand, with its excellent shilling books, such as "The 10.30 Limited," its regular conducted trips over Swindon locomotive works, and other junior attractions. American railways have now followed suit, and constant applications to the Association of American Railroads and to individual railways, by teachers and others concerned in educating the young, for railway booklets, pictures, and so on, have led to a concerted move to satisfy this thirst for information. The A.R.A. has therefore produced what is called a "Teacher's Kit," which consists of a 56-page teacher's manual of information, containing chronological, mileage, statistical, and other railway data and a bibliography of railway books and publications generally; 56 attractive pictures, 10 in. x 7 in. in size, portraying many aspects of the railway for display in schools and elsewhere; and a 72-page booklet entitled "The Stories behind the Pictures." Specimen kits were sent in January to all state, county, city, and parochial school superintendents, and to the heads of private, primary and elementary schools, junior high schools, presidents of teachers' colleges, and editors of educational publications, the job being thus done on a thoroughgoing scale throughout the U.S.A. The effect of such carefully-conceived propaganda on the rising generation may be very considerable in its effect on the future of the railways.

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### Locomotive Operating Changes

Some of the changes in British locomotive operating brought about by war conditions have been of considerable interest. In order to release the more powerful locomotive types for the movement of personnel, munitions, and freight, a kind of "stepping down" in locomotive power has taken place in many directions. For example, the Euston-Birmingham-Wolverhampton expresses of the L.M.S.R. which before the war were being hauled by Class "5XP" 4-6-0 locomotives, and in the first war years were turned over to the even more powerful Class "6" engines of the Royal Scot type, have now reverted to the 4-4-0 Class "4" Midland compounds, by which they were worked in the earliest years

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of the grouping. Standard tank engines of the 2-6-4 type have taken over four 4-6-0 tender locomotive workings between Euston, Northampton, and Rugby, and to replace certain of the 2-6-4 locomotives concerned, the smaller 2-6-2 tanks have now made their appearance on the outer suburban services between Euston, Broad Street, and Watford. So far as the principal L.N.E.R. main line is concerned, at present scheduled speeds the heaviest duties are within the capacity of the now numerous "V2" 2-6-2 engines of the Green Arrow type, and the corresponding stepping down here has been a complete interchangeability of working between these most useful mixed traffic locomotives and the Pacifics. Further north, a similar process is apparent in the transfer of passenger services over the 60-mile Newcastle-Carlisle line from 3-cylinder 4-4-0 express engines of the "Shire" and "Hunt" classes to the "V1" and "V3" 2-6-2 tanks.

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### Was the Revised Agreement a Bad Bargain?

**T**HE Ministry of War Transport has now issued a White Paper (Cmd. 6349) giving estimates of the pooled revenue receipts and expenses and the resultant net revenue of the controlled undertakings for the year ended December 31, 1941, the first complete year under the revised financial arrangements which became operative on and from January 1, 1941 (Cmd. 6314). The estimated gross receipts of the controlled companies and joint lines in respect of railway working and of the London Passenger Transport Board in respect of railway working and road services for the year 1941 were £293,835,000. The estimated expenditure was £226,636,000 and, after deducting the net revenue included in the pool from ancillary businesses such as steamboats, docks, hotels, collection and delivery of parcels and goods, rents, interest, and certain other miscellaneous items amounting to £2,074,000, the net revenue of the pool is estimated at £65,125,000. This compares with the fixed annual sum of £43,469,000 which is payable to the controlled undertakings under the revised financial arrangements and the difference of nearly £22 millions accordingly accrues to the Government. As a matter of interest it may be added that the standard revenues of the controlled railway companies and the sum required to pay interest on London Transport stocks amounts to approximately £56 millions, a figure which was considerably below that earned in 1941. The net revenue of the pool for 1940 was estimated at £42,763,000, but no true comparison can be made between the figures for the two years because the 1941 estimates do not include any charge for war damage whereas the 1940 estimates included a charge which, for national reasons, was not disclosed.

Although the White Paper indicates that the receipts and expenditure in 1941 are not comparable with the figures for 1940 by reason of the increased level of rates and charges and the increased rates of wages and prices of materials, it is of interest that the gross receipts in 1941 were £45,843,000 or nearly 19 per cent. more than in 1940. Of these, passenger receipts showed an increase of £27,321,000 over 1940 and freight receipts an increase of £18,328,000. On the other hand, the estimated expenditure showed an increase over 1940 of £23,156,000 only, or slightly over 11 per cent. So far as the increased level of rates and charges is concerned, a 10 per cent. increase became operative on May 1, 1940, and a second increase on December 1, 1940, brought the total increase up to 16½ per cent. above pre-war, at which level they remain. It will be realised, therefore, that the increased charges cannot be entirely responsible for the substantial improvement in receipts. No figures have been published, however, indicating the extent to which the increased expenditure is attributable to higher wages and prices of materials, as distinct from costs attributable to the movement of additional traffic.

The financial results for 1941 show clearly that the railway companies' objections to the original financial arrangements were amply justified. It may be remembered that in 1938 the railway companies proposed that, in the event of their undertakings being taken over by the Government in a time of national emergency, they should be paid their standard revenues as being the reasonable level of income which, con-

sonant with the public interest, they should be expected to earn. The Government insisted, however, that the companies' remuneration should be based on pre-emergency profits, *plus* some addition by way of the retention of a share in increased profits actually earned, up to a maximum above which the whole of the net earnings would be taken by the Government. They also stipulated that the companies should have some inducement to see that charges were maintained at an economic level and machinery was provided whereby charges were to be adjusted as necessary to meet variations in prices and conditions arising from the war, without consideration to the volume of the traffic.

Although the companies had, for a variety of reasons, little option but to accept the Government's proposals, they placed on record at the time their considered view that their own proposals would have provided a simple, sound, and equitable basis for a settlement and would have obviated many of the difficulties, both practical and political, which they foresaw were inherent in the Government's plan. Had this arrangement not been superseded by the Government as a result of its decision during 1940 to stabilise prices, including transport costs, railway rates and charges would have been very substantially increased under the agreed machinery and the net revenue of the pool in 1941 would thus have been very much higher than under the revised agreement.

The fact that the Government takes the surplus profit of nearly £22 millions from the pool has led to a revival of the criticism in certain quarters that in negotiating the revised agreement the railway boards made a bad bargain for their stockholders. If the 1941 earnings were the only criterion, this criticism might be justified, but it should be borne in mind that the present guaranteed revenue operates from December 31, 1940, throughout the period of control, which is to be continued for at least one year after the cessation of hostilities.

In reaching their decision to accept the Government's offer of a guaranteed annual payment of £43,469,000, the boards were greatly influenced by the fact that, although the sum could in no way be taken as representing the existing or potential earning capacity of the undertakings, nevertheless contingencies might arise substantially affecting the earning capacity of the undertakings, such as, for example, invasion, or a decline in traffics towards the end of the control period. Moreover, a further valuable provision is that before control comes to an end, that is before all statutory rights and obligations as they exist at that time again apply to the controlled undertakings, the Government will give time for the operation of the statutory machinery governing the level of railway rates and charges. Thus, subject to any legislation which may be passed in the meantime (a contingency against which no one can provide) the railway companies are to be reinstated in their standard revenue statutory position before control ends. Having in mind the hazards of war, and particularly the surprising turn of events in the present war, the offer finally made by the Government and accepted by the boards, although not generous, cannot be considered as unfair to the stockholders if full recognition is given to the national interests as represented to the boards by the Government.

*An important feature of the 1941 pool results is that they show that railway standard revenues can no longer be considered as mythical. On the contrary, they are clearly attainable even under the difficult operating conditions arising from the war, including the restrictions on passenger travel, a consideration which may well prove of very great value at a later date.*

Finally, the figures give some indication of the substantial contribution which the railways are making to the war effort and, when the full story of their achievement can be related, there can be little doubt that the public will agree that, to quote the Railway Companies' Association memorandum to the Minister of Transport dated November 23, 1938, "no effort should be spared to see that equitable conditions are given during peacetime to a public service of such vital importance if it is to fulfil satisfactorily the responsibility which must inevitably fall upon it under conditions of emergency."

## LETTERS TO THE EDITOR

(*The Editor is not responsible for the opinions of correspondents*)

### Should the State Own or Run the Railways?

10-12, Copthall Avenue, E.C.2

April 27

**SIR.**—The investing public and all who are vitally interested in railway policy are grateful to you for your article appearing in your last issue. Do the British Public, or even the Government, fully appreciate what we owe to the skill and enterprise of British railway management, together with the abstinence of the stockholders, in providing for many years before the war an efficient instrument in the conduct of transport under war conditions? If the discussions from time to time in the House of Commons can be relied upon as evidence then the question must be answered in the negative.

You set out in your article the various indications of increased efficiency on the eve of the war and for some years before, including efficiency in such matters as train speeds, freight facilities, etc., etc.; so that it can be truthfully said that on the outbreak of the war, in spite of the fact that our railway system is the oldest in the world, it was by a long way the most efficient. It must be regrettably admitted that, due to growing austerity in war conditions, many of these improvements and facilities have had to be curtailed or even abandoned, but that is certainly not the fault of management and is to be almost wholly attributed to the necessity of adapting railway transport to war urgency.

I would earnestly request all who have to deal with this problem to recognise from the start that in the national interest the problem is by no means insoluble; but a permanent solution can be found only if the chaotic condition of railway finance on the outbreak of war is fully recognised and removed. Due to increasing regulations of railways, and increasing license (aided by public subsidy) on the roads, the Railways Act, 1921, became inoperative and the standard revenue unobtainable. The direct consequence of this was that the railway companies could not, from their own resources, finance the necessary capital development. After resorting for a good many years to the doubtful expedient of increasing debenture and preference capital, the companies were driven to accept Government aid and in January, 1936, the Railway Finance Corporation, aided by the Government guarantee, issued £27 millions of 2½ per cent. debenture stock, the whole of which was doled out to the four group companies. Similarly, the London Electric Transport Finance Corporation, with the aid of Government guarantee,

issued over £41½ millions of 2½ per cent. guaranteed debenture stock, 70 per cent. of the proceeds of which went to finance the London Passenger Transport Board and the remainder—5 per cent. to the Great Western and 25 per cent. to the London & North Eastern. By the way, these loans have actually to be repaid in the former case in 1951-2, and the second and larger issue in 1950-55. The reason, briefly, for this unusual method of finance was the inability of the companies to raise further money due to the disastrous depreciation in the junior securities—in other words, as a financial device to sustain a healthy transport system, the Railways Act, 1921, was allowed to break down.

Now in war conditions, an official return of the Ministry of War Transport shows that the original "standard revenue" of about £55 millions was earned last year with an excess of about £10 millions. If there is any "profiteering" it may be said that the Government is guilty, because the fixed payment for the use of the railways under the revised agreement is barely £49½ millions a year. This outstanding development answers those critics who suggested that the railways could not be expected to earn their standard revenue. It is true that war conditions have contributed, but it must be remembered that the Government and the railways themselves have done their utmost to dissuade the public from using railways—also to the point of austerity. Most authorities will agree that whatever plan may be adopted for the future, skilled and efficient private management should be preserved. What is not equally realised is that the financial solution is the root of the entire problem. The suggestion you have put forward in the course of your article is a very timely one—namely that the State should acquire the permanent way and terminals owned by the railways, corresponding to the State ownership already comprising the roads. In round figures £800 millions of railway capital is represented in the permanent way, etc., and the interest charge on this sum at 4 per cent. comes to no less than £32 millions, or within £12 millions of the fixed rental paid by the Government, so that the problem is at once narrowed. And railway proprietors have to maintain and police their own roads—not to mention the cost of signalling. Railway and road interests in their previous negotiations for a "square deal" have already attained considerable common understanding of each other's problems, and your suggestion may, therefore, be viewed sympathetically in quarters which are assumed to be mutually opposed. And it may also be suggested that as post-war planning will occupy the Government pretty fully at a later stage, there is no reason why the vital transport problem should not be solved forthwith.

Yours faithfully,  
W. J. STEVENS

## Publications Received

**British Railway Rolling Stock.** By H. C. Webster. London: Oxford University Press. 8½ in. x 5½ in. 159 pp. Illustrated. Price 4s. 6d. net.—The general style of this book is attractive and should make a ready appeal to the non-technical reader who is interested in locomotives and railway rolling stock. It is divided into three sections respectively headed Locomotives; Carriage stock; and Service and freight vehicles; each section contains a number of half-tone illustrations and the text is written in a style that loses nothing by being framed on conversational rather than on purely descriptive lines. The selection of photographs in all three sections is good though had the space at disposal permitted, other designs of equal interest would have a rightful claim for inclusion. The author has done well in the service and freight section where several special types of vehicles are illustrated and particulars of dimensions and features given.

With all this established it is the more to be regretted that the book contains several mis-statements of fact, some of which are difficult to explain. The principal one is the frequent use of the term drawbar pull where obviously tractive effort is really meant. This is done in nearly all cases and we read on page 35 for instance that the six-cylinder 2-8-0 + 0-8-2 Beyer Garratt locomotive of the L.N.E.R. "has the enormous drawbar pull of 72,940 lb." a truly remarkable figure we agree, but mean-

ingless in this connection unless used to denote the tractive force exerted by the engine, when it would be correctly stated. Other instances of the same kind suggest that the author has confused the meaning of the respective terms.

In a reference to the "Merchant Navy" class locomotives of the Southern Railway the author makes the somewhat astonishing statement that the introduction of these engines makes the adherents among British railways of three and four-cylinder arrangements nearly equal "in that broadly speaking the L.N.E.R. and now presumably the S.R. favour three whilst the G.W. and L.M.S. very largely favour four cylinders." Apart from the fact that the Southern have had three-cylinder locomotives of various types in service for many years past there is the fact that the L.M.S.R. is largely a three-cylinder line, as witness the "Royal Scot," "5X," "Patriot," "4 P." class compounds, and many of the 2-6-4 type tanks are thus fitted.

We cannot quite follow the author's reasoning when he says that "the use of four cylinders permits a more even distribution of the turning effort at the wheels, since it is spread over two axles instead of being concentrated on one and it also permits a better division of weight amongst the coupled wheels. On the other hand the pair of cylinders driving the leading axle must necessarily have short connecting rods which is scientifically unsound." This is part of a comment on the relative advantages and disadvantages of three- and four-

cylinder arrangements, but we have to remember that many three-cylinder engines have a "divided" drive, the inside cylinder driving the leading and the outside ones the middle pair of coupled wheels as in most four-cylinder ones. Moreover, the turning moment of a three-cylinder with cranks disposed at 120° is, if anything, superior to the usual four-cylinder crank arrangement, whilst as regards weight distribution there are two pairs of coupled wheels directly driven in both cases.

The L.M.S.R. "Royal Scot" locomotives were, it is stated, "originally designed with parallel boilers but had since been modified by Mr. Stanier, who has put in coned boilers." Only one of these engines has so far been altered, that is No. 6170, originally constructed as a high-pressure three-cylinder compound built for experimental purposes in Sir Henry Fowler's time. Locomotive superheating is referred to by the author as "the great discovery of the late Sir John Aspinall in 1906" whereas superheating apparatus was actually fitted to locomotives several years before this date. The Aspinall superheater was of the smoke box type, very different in its arrangement from the Schmidt and other apparatus of the smoke tube pattern previously and subsequently used. On another page, 21 tons on a coupled axle is referred to as being "very high," but even in this country where locomotives are lighter than on most first-grade railways abroad, individual axleloads of 22 and 22½ tons are in use although, it is true, only in a limited sense.

## THE SCRAP HEAP

### RAILWAY PRESS RIVALRY IN 1842

The first of the various railway journals now amalgamated with THE RAILWAY GAZETTE was *Herapath's*. It was established as a monthly in 1835, and became a weekly in 1839. From time to time several slight changes were made in its title which eventually became *Herapath's Railway Journal*. The *Railway Times* (also now incorporated with THE RAILWAY GAZETTE) was started in 1837, as a weekly. Mr. Herapath evidently resented this rivalry very much.

### A GREAT BARGAIN FOR FLATS.

**TO BE SOLD,** that **MINE OF WEALTH, THE RAILWAY TIMES,** having a wonderful circulation, of which not exceeding 40,000, half-yearly made up of double number, half-penny stamp, to country papers, other innocent means of manufacturing a circumspect, it has been only 2 or 3 years in the market, offered successively, for £3,000, £2,000, and £1,000, and no one having discovered its intrinsic value, may now be had a dead bargain, the Proprietors having no motives for parting with it, but that it does not pay, and is some thousands in debt.

N.B. 1. No one wanting to see seconds need apply, nor any one who has not plenty of money and little wit.  
N.B. 2. The secret of making up a circulation to be imparted to the purchaser gratis; also the wagons herefore employed to remove surplus numbers, ensured for my night, with a guarantee for secrecy and despatch.

"For further particulars see *Railway Magazine* for last March 30th, page 325.

as will be seen from the reproduction of the announcement which appeared on the front cover of *Herapath's Railway Magazine* for Saturday, May 7, 1842. The law of libel must have been very different 100 years ago from what it is to-day! In those days, too, all newspapers had to bear a Government stamp, and the number of stamps sold each quarter was published and thus revealed the respective circulations of all newspapers. We reproduce an announcement from *Herapath's Railway Magazine* dated Saturday, July 2, 1842, showing the number of stamps purchased for six months by the rival publications. It would appear from this that the weekly circulation of

### HERAPATH'S

## RAILWAY MAGAZINE

SATURDAY, JULY 2, 1842.

### The Railway Press.

The *Railway Times* has, for some time, been trumpeting forth its circulation, and endeavouring to lead the public into a belief of its flourishing and increasing condition. The following figures, from their own paper, will be the best reply:

	Railway Times.	Railway Magazine.
Preceding 3 months.....	36,202	15,250
Last 3 months.....	40,850	
Less for 4 double Nos. 12,568		
	28,282	20,000

Decrease *Railway Times*.... 7,980

Increase *Railway Magazine*. 4,750

Taking their own account, that the half-penny stamps alone were for the double numbers, and it stands thus  $5,300 \times \frac{13}{4} = 17,387$  for the past quarter's circulation, giving a falling off of 18,875 on the preceding quarter, and leaving 23,463 to be somehow accounted for.

After this, can any one doubt how its circulation is made up, or the rumour of the *Railway Times* being £3,000 in debt, and the anxiety of the Proprietors to get rid of it?

*Herapath's Railway Magazine* averaged 1,540 copies and *The Railway Times* 2,180. Notwithstanding Mr. Herapath's forecasts of calamity to his rival, *Herapath's Railway Journal*, was eventually amalgamated with *The Railway Times* in 1903, and *The Railway Times* amalgamated with THE RAILWAY GAZETTE in 1914.

\* \* \*

During the past four months nearly 11,000 tons of scrap metal from bombed London has been loaded into wagons and despatched by the L.M.S.R. to blast furnaces. The transport of this material required the use of 2,900 wagons.

### A TRAGIC STORY

Incredible as this story may seem, the man who told it swears that it is true. He went to call at the house of his married sister in a West of Scotland town, and the first thing that greeted him when the door was opened was a strong smell of whisky. It seemed to come from the kitchen, and as it was a surprising odour to find in this particular house, he went in to see what was happening. On the dresser stood an empty whisky bottle, and over the sink his sister was holding another one, upside down, from which the last drops were falling. "Oh, hello," she said, giving the bottle a last shake, "I'm just getting rid of this old whisky. These two bottles have been in the house since I was married, and when I found them at the back of a cupboard to-day, I thought I might as well get rid of the stuff. I knew it must have gone bad by this time."—From "The Glasgow Herald."

\* \* \*

### YORK TO LONDON IN 1862

Mr. Joseph Cuthbert, of Clifton, York, wrote an account of his visit to London to see the Exhibition of 1862. Of the railway journey he wrote:

"Having determined on visiting London, to see the Great International Exhibition of 1862 and the other sights with which that city abounds, we resolved on noting down the principal incidents which occurred to us during our stay, for the purpose of referring to and refreshing the memory in future years. Should it be the lot of any of us to re-visit those busy and exciting scenes.

"As this was an event of no ordinary importance to us we had been busy in preparing for our journey for the last few days, and started from York on our excursion, by the Midland Counties Line, on Saturday, the ninth day of August, at ten o'clock. The weather for the two preceding days had been very wet, but this morning, though dull, soon began to look brighter, and give hopes of finer weather. We arrived at Milford Junction at 20 minutes past 10 o'clock and reached Normanton at 11 o'clock, where we changed carriages and entered the one which took us through to London, and where we received some fresh passengers. We reached Mabs' Station at 12 o'clock at noon, where we received the last passenger, which filled the compartment of our carriage, the whole of whom proved to be very agreeable companions.

"We now stopped at no more stations till we reached the Trent Valley station at half-past one, where we were allowed ten minutes for refreshment. The country through Derbyshire and Leicestershire was exceedingly beautiful and picturesque. We passed Leicester at two

o'clock and Bedford at four. We soon afterwards reached Hitchin, where the Midland Line merged into the Great Northern, and we arrived at King's Cross Station in London at six o'clock, after a very pleasant journey.—From "The London & North Eastern Railway Magazine."

### SINGLE COMBAT

Old lady (sharply, at booking office): "Give me a single return to Derby."

Clerk: "Eh?"

Old lady (more sharply): "I said give me a single return to Derby."

Clerk (protestingly): "But there is no such thing as single return, madam. A single—yes. A return—yes. But not a single return."

Old lady (indignantly): "Stuff and nonsense! I ask in the plainest of plain English for one return to Derby and you have the ignorance and effrontery to say there's no such thing. How ever you passed your entrance examination for the railway I can't for the life of me imagine!"

Clerk (humbly): "No, madam."—From "The Manchester Guardian."

### A POSTER "DOUBLE"

I thought I had found the original of the officer in Charles Wood's vigorous "Merchant Navy" poster. When I passed through Paddington Station I saw, standing near the poster, Mr. Gilbert Matthews, the G.W.R. Superintendent-of-the-Line. He has the same strong features. When I asked one of his colleagues whether Mr. Matthews had been the artist's model, I



was told: "Just a coincidence. Mr. Matthews is too busy to find time for studio sittings." I also learned that this was by no means the first time that the remarkable resemblance had caused platform comment. Oddly enough Mr. Matthews' hobby is ships, and he has a great knowledge of the Navy. If circumstances had not cast him for a railway career he would have been a sailor.—From "A Star Man's Diary."

## OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

### RHODESIA

#### Cost of Living Allowances

After the announcement that the Southern Rhodesia Government had authorised the payment of cost of living allowance to government employees on the basis that the cost of living had risen by 6 per cent since the outbreak of war, the Rhodesia Railways commenced the payment of a similar allowance to their staff with effect from September 1, 1941. The Southern Rhodesia Government scale of allowance was paid to the railway staff in that Colony and in Portuguese East Africa, but in Northern Rhodesia where a somewhat higher allowance had been granted to the employees of the copper mines the railwaymen appealed for arbitration to consider their request for a similar scale of allowance. An arbitration tribunal was appointed by the Northern Rhodesia Government to hear the dispute between the Rhodesia Railways and the Rhodesia Railway Workers' Union. The tribunal sat for a week in November and awarded a cost of living allowance from August 1, 1941, on a man-unit basis somewhat similar to the mine employees' allowance. This basis differentiated between families of various sizes and is subject to review every three months as to the cost of living.

Under both the Southern Rhodesia and Northern Rhodesia schemes the ceiling for single employees was £240 a year and for married employees £500 a year. In January, 1942, the Southern Rhodesia Government found that the cost of living had risen to approximately 8 per cent. on pre-war prices and announced a revised and higher scale with a ceiling for married employees of £600 a year. This increased allowance is being paid to the railway employees in Southern Rhodesia and Portuguese East Africa.

#### Railways Amendment Bill

Reference was made on page 7 of THE RAILWAY GAZETTE of January 2, 1942, to the Railways Amendment Bill, 1941, which was recently passed by the Southern Rhodesia Legislative Assembly. In the brief summary of the main points of this Act the method of dealing with deficits in any year's working was incorrectly described and it is desirable to clarify the position. The actual method is as follows:—If at the end of any year the realised income is less than the standard revenue such deficit shall be met in the following manner—

- (i) where a reserve provision was included in the standard revenue for the year such deficit will be apportioned between the dividend sum and the reserve provision respectively, in the proportion which the dividend sum bears to the reserve provision and the latter proportion shall be borne by the rates stabilisation account;
- (ii) where no reserve provision was included in the standard revenue, such deficit will be borne by the dividend sum to the extent thereof; and
- (iii) any deficit in excess of the reserve provision (if any) and the dividend sum will be borne by the rates stabilisation account so far as that account suffices and thereafter by the reserve account.

Thus if the reserve account is full to the extent of  $2\frac{1}{2}$  times the loan provision, as it is at present, then any deficit is borne

first by the dividend sum to the extent thereof, then by the rates stabilisation fund as far as it suffices and lastly by the reserve account.

### UNITED STATES

#### The Norfolk Southern Railway

Another railway emancipation from receivership has taken place with the formation of the Norfolk Southern Railway Company, which, on January 1, 1942, took over the properties and operation of the Norfolk Southern Railroad. The latter has been in equity receivership from 1932 until it was sold to the new company in March last. On January 21 the board of directors of the new company confirmed the election as president of Mr. Morris S. Hawkins, former co-receiver of the line; Mr. L. H. Windholz, the other co-receiver, is Chairman. The Norfolk Southern is based on Norfolk, Virginia, and owns 805 miles of track; the main line, 399 miles long, connects Norfolk with Charlotte, at the western extremity of North Carolina, but the service over this and the various branches is almost exclusively freight.

#### Alaskan Traffic in 1941

Defence activities at the port of Anchorage and at the mining centre of Fairbanks, Alaska, have resulted in a busy year for the Alaska Railroad, which is owned and worked by the United States Government. In the fiscal year ended June 30, 1941, a profit of \$2,486,331 was made, as compared with only \$318,168 in the previous year. The number of passengers carried in the year increased from 29,510 to 43,292, and the tonnage of freight from 194,467 to 361,295; the latter thus practically reached an average of 1,000 tons a day, and all but doubled the 1940 figure. During the year ended June 30, 1941, operating expenses were \$3,007,583, and revenue totalled \$5,518,623. During the summer the usual service of three return passenger trips weekly over the entire 470 miles of the line was maintained between the port of Seward and Fairbanks, with additional trains between Seward and Anchorage, and McKinley Park, Nenana, and Fairbanks. The winter service of passenger trains is limited to one return trip each week.

#### Increased Season Ticket Rates

As mentioned in previous issues of THE RAILWAY GAZETTE, the Interstate Commerce Commission authorised a general increase in passenger fares up to 10 per cent., which took effect on February 10. Interstate fares—that is, fares which operate within the borders of one state only—are not covered by the I.C.C. ruling, however, but are subject to the laws of the state concerned, and this has led to a curious position in New York. Commuters' or season tickets into and out of New York on the Pennsylvania, Reading, Erie, Central of New Jersey, Lehigh Valley, Delaware, Lackawanna & Western, and West Shore Railway, have been increased in cost by 10 per cent. from the same date, as the passengers concerned travel in the states of both New York and New Jersey, whereas suburban travel on the New York Central, Long Island, and, in large measure, the New York, New Haven & Hartford is all in the one state of New York and the New York Public Service Commission has refused to give a corresponding authorisation for fare increases. Railways serving Chicago have petitioned the Illinois Commerce Commission for authority to increase

their suburban season ticket and multiple-trip fares in conformity with the inter-state increase, but although the Commission issued an order on February 18 suspending for four months the suburban rate increases filed by 14 railways, the Illinois Central RR, increased certain of its season ticket rates by 10 per cent. from March 8.

#### New Steam Locomotive Orders

An order has been placed by the Union Pacific Railroad with the American Locomotive Company for 30 fast freight locomotives of the 4-6-6-4 articulated type, additional to the 20 of this type already on order, making 50 in all; the Northern Pacific is also enquiring for 15 4-6-6-4 locomotives. Of non-articulated types the Atchison, Topeka & Santa Fe is in the market for 20 steam locomotives of the 4-8-4 type, and the Delaware & Hudson has ordered 15 of the same wheel arrangement from the American Locomotive Co. The New York, Chicago & St. Louis has ordered 10 2-8-4 locomotives from the Lima Locomotive Works. The Southern Pacific RR., which as recently as March, 1941, placed orders for 40 of the large cab-in-front type 4-8-8-2 articulated locomotives, and 10 streamlined 4-8-4s of the Daylight type, is inquiring for 30 more of the former, and 10 more of the latter. The 1941 order alone cost \$11,000,000.

### SWEDEN

#### Power Stations and Railways

Both chambers of the Riksdag have agreed to the Government's proposals for budget allowances for the construction of hydro-electric power stations and other measures to increase the supply of electric power. Among these allowances are Kr. 2·4 million for further construction work on the Hojum station, Trolhattan, Kr. 7·9 million for construction work at Torpshammar, and Kr. 12 million for the Midskogsforse power station.

Budget estimates for the State Railways were also accepted. They included Kr. 10 million for the construction of double tracks, Kr. 3·7 million for renewal of rails, Kr. 14 million for further electrification of the State Railway Lines Helsingborg-Hässleholm, Helsingborg-Eslof, Sundsvall-Ånge, and Gävle-Ockelbo, Kr. 5·6 million for the purchase of goods trucks, Kr. 2 million for passenger coaches, Kr. 1·5 million for buses, and allowances for defence emergency measures on the railways.

### JAPAN

#### Lines under Construction

Construction on nine new railway sections in various parts of Japan was slowed down immediately when the country went to war. Other railways being built were speeded up, however: these are:

- (i) an extension of the Hakodate-Kikonai line to Fukuyama, 20 miles, on the most southerly point of the island of Hokkaido, to reach the manganese ore deposits in the district;
- (ii) the Shibukawa-Naganohara branch (28 miles) of the Tokyo-Niigata main line in an iron ore district, on the main island, Honshu;
- (iii) the Sonobe-Sasayama line (21 miles) between the main lines from Kyoto and Osaka to the north coast in central Honshu, through siliceous deposits.

These three lines, all through rather difficult country, have been ordered to be completed within two years, a year earlier than the original plan.

## ELECTRIC TRACTION SECTION

### Thoughts on Electricity for Transmission

**S**O much is taken for granted in the world of electrical engineering, that a brief reversion to fundamentals often gives one furiously to think. For example, it is commonly supposed and said that a cable carries current, but actually the energy is transmitted not through the cable but through the insulation surrounding it. Conductors are insulated to enable them to be surrounded by a high electric field through which they can pass energy along to the end of the line. The sole use of the cable or wire is to carry a current in order to provide a sustained magnetic field by which the flow of energy can be maintained through the electric field in the insulation, because in any transmission of energy there must be an electrical field and a magnetic field at right angles to it. Similarly, in a motor no useful energy enters the copper of the armature winding; what energy does go in remains there as heat. The energy that drives the motor goes along the insulation of the windings and then enters the insulation between the iron stampings of the armature core and passes out into the metal.

### Electrification of the Furka-Oberalp Railway

**A** SWISS project which has strategic as well as public importance has been carried a stage further by the completion of the electrification work on the Furka-Oberalp Railway, save for a short stretch of 18 km. (11½ miles) between Realp and Oberwald. The Furka-Oberalp forms a direct link, across the heart of Switzerland, between the Cantons of Graubünden (the Grisons) and Valais, using for this purpose the upper reaches of the Rhine and Rhône valleys, which are directly in line with one another. At Disentis, in the Grisons, an end-on junction is made with the electrified Rhaetian system, and at the western end, at Brig, in the Valais, a similar link is made with the Visp-Zermatt Railway; the Rhaetian, Furka-Oberalp, and Visp-Zermatt are all metre-gauge lines. Further importance is lent to the Furka-Oberalp by its connection with the Simplon main line at Brig, and, by means of the short Schöllenen Railway from Andermatt, with the Gotthard main line at Göschenen. The F.O., V.Z., and Schöllenen lines are under one management. As a set-off to its directness, the Furka-Oberalp, which takes its name from the two high passes over which it is carried, is throughout its length laid on extremely heavy gradients, with 11 rack-and-pinion sections on the Abt system totalling 31·8 km. (19½ miles), and with a maximum steepness of 11 per cent. (1 in 9). In the remainder of its length of 97 km. (60½ miles), there are adhesion gradients as steep as 4 per cent. (1 in 25), though for the most part the steepest inclinations are between 2·7 and 3·6 per cent. (1 in 37 and 1 in 28).

At Brig the altitude is 2,205 ft. above sea level, and at Oberwald, in 42 km. (26 miles) up the Rhône valley, and the present limit of the western electrification, the line has risen to 4,490 ft. Then follows the severe climb to the 2,032-yd. Furka tunnel, at 7,105 ft. altitude, the highest point on the line. This tunnel carries the railway through to the Reuss watershed; Realp, the limit of the eastern electrification and 60 km. (37½ miles) from Brig, is 5,065 ft. above the sea, and Andermatt 4,720 ft. in altitude. From Andermatt there is a rack-equipped section to climb to the Oberalp pass, 6,720 ft. above sea level, from which the line drops into the valley of the Vorder Rhine, at Disentis, 3,715 ft. above the sea. As to engineering features, there are spiral tunnels in the Rhône valley at Griengiols, between Brig and Oberwald, also between Oberwald and Gletsch, and between Andermatt and Oberalpsee. Another particularly interesting engineering feature is the bridge over the Steffenbach gorge, on the eastern approach to the Furka tunnel, replacing two previous structures that were swept away by avalanches. The present bridge is ingeniously designed in such a way that it can be dismantled or re-assembled in a single day's opera-

tion, and stowed for the winter on either side of the gorge. The Brig-Gletsch section was opened in 1915, and the remainder of the route, after many difficulties, in 1926. The opening of the short metre-gauge connecting line from Brig to Visp in 1930 allowed through trains to be run, in particular the well-known Glacier Express from St. Moritz to Zermatt, and brought a revival of traffic to the Furka-Oberalp line. Because of the depression, however, this was short-lived and there was some question of closing the central portion, which was in any case worked only from June to September. The value of the Andermatt-Disentis section, however, as the most direct means of communication across southern Switzerland (see THE RAILWAY GAZETTE for February 17, 1939, p. 261), made it advisable to maintain and equip it for all-year operation. Apart from electrification, important works were necessary to protect the line from avalanches, especially between Oberalpsee and Tscharnau. A concrete protecting gallery 740 metres (809 yd.) in length was built on the shore of the Oberalp lake, covering both road and railway, and at the pass a new location was selected for the line, including a dam across the end of the lake and a 220 yd. tunnel. The greater part of the work could only be carried out in summer, this portion of the route being at an altitude of over 6,500 ft.

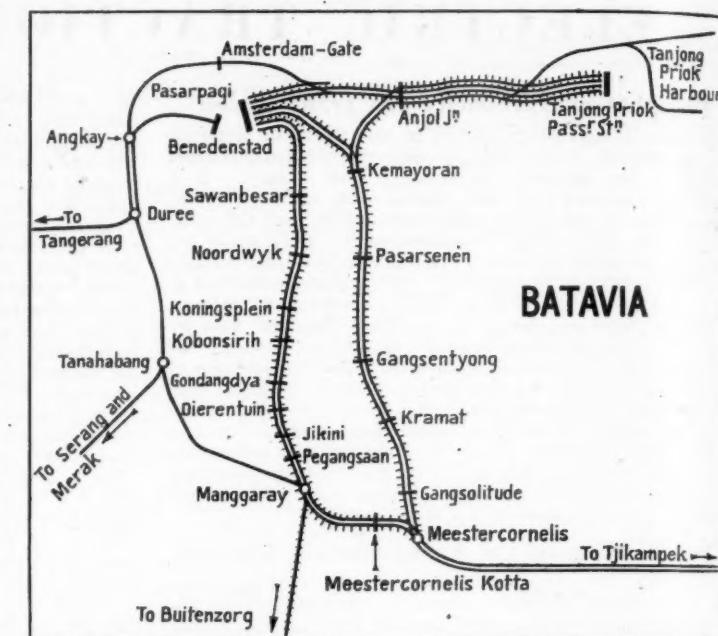
In order to eliminate steam traction as early as possible for the works trains between Andermatt and Oberalpsee, this section was converted first and worked with an O-B-O locomotive of the Schöllenen Railway, with d.c. at 1,200 volts supplied by that railway, from July 12 to September 6, 1940, at which date supply began from the Federal Railways sub-station at Göschenen, with single-phase current at 11 kV, and a B-B type locomotive of the Visp-Zermatt Railway was placed in service. On October 21, electric traction commenced on the Disentis-Sedrun-Tscharnau section, using single-phase current supplied by the Rhaetian Railway, and with a second Visp-Zermatt locomotive. Four engines, ordered from the Oerlikon works, were placed in service in the following spring, and on June 1, 1941, the Oberalp-Tscharnau section was completed, providing through electric traction from Andermatt to Disentis. Meanwhile arrangements had been made for the whole line to be supplied from Göschenen, and the Rhaetian supply had been discontinued since early April. The short level stretch from Andermatt to Realp was converted on September 26 last. At the other end of the line, although traffic is also light, the long gradients and rack sections made conversion desirable in view of the shortage and high cost of fuel, and it was decided to electrify the 42 km. (26 miles) portion which is normally worked throughout the year. The Brig-Niederwald section was opened on October 13, 1941, and the rest of the line up to Oberwald on November 14, 1941.

The four locomotives supplied by Oerlikon and the Swiss Locomotive & Machine Works at Winterthur are designed for working over both rack and adhesion sections and are of B-B type, taring 46 tonnes and having an overall length of 14·1 metres. A small luggage compartment is provided. The maximum speed on adhesion sections is 55 km.p.h. (34·1 m.p.h.) and the tractive effort at the wheel-rims 11,600 kgs. on the 1-hour basis at 27 km.p.h. (16·7 m.p.h.). Brown Boveri has provided the electric equipment for 5 motor-coaches, intended to work both on the Furka-Oberalp itself and on the Schöllenen line, where the maximum gradient is 17·9 per cent. These vehicles are 33 tonnes with an overall length of 16·7 metres, and have a maximum speed of 60 km.p.h. (37 m.p.h.) on adhesion sections and 30 km.p.h. (18·6 m.p.h.) on the rack. They develop about 600 h.p. Second and third class passenger accommodation is provided, seating 40 passengers, with a baggage compartment. The two motors, working on both the adhesion and rack driving-wheels, are in one bogie, and the other is fitted with a rack braking wheel. A 500 h.p. snow-plough has also been placed in service.

## Electric Traction in Java

JAVA, the principal island of the Netherlands East Indies, is served by an extensive railway system owned by the State, and built to a gauge of 3 ft. 6 in. There are also smaller lines owned by private companies, some of which are of the same gauge and others of 4 ft. 8½ in. gauge. The only electrified mileage, however, is in the Batavia district where 80 route km. (50 miles) are electrically-operated, as shown on the accompanying sketch map. All the electric lines indicated by herring-boned lines are the property of the State and no private-railway works in the neighbourhood of Batavia. The main line section from Batavia to Tjikampel (electrified as far as Meestercornelis) is double-track, as is also the Batavia suburban circle line. The Batavia to Tanjong Priok line has four tracks between Anjol Junction and Tanjong Priok.

Proposals for electrifying the Java State Railways were made as long ago as 1911, but the first practical steps were taken on the basis of a report made in 1917, by P. A. Roelofsen, then Chief Engineer, who contemplated the conversion of the whole main line from Batavia to Soerabaya. It was considered by some, however, that the mountain sections would better repay the change. There was a good deal of opposition to the plan, but finally it was decided in 1922 to deal first with the short section from Meestercornelis Priok. Shortly afterwards it was decided to convert the whole Batavia district, and then, in 1927, the main line as far as Buitenzorg. The first electrified section was opened on April 6, 1925, the 50th anniversary of the opening of the first State Railway line. Water power is used, with 3-phase a.c. transmission at 70,000 volts, transformed down at the substations to 6,000 volts and converted, either by rotary converters or rectifiers into 1,500 d.c. at the contact wire. There is an emergency connection to a private steam generating



station. Side bracket construction is used, with span wires in stations and yards, giving an excellent view of the signals.

Both multiple-unit and locomotive traction are employed, the latter being of course essential for the goods and through passenger services. Three classes of carriage were retained. The electric trains have proved very popular. The State Railways have 25 electric motor coaches and 26 trailers for their Batavia local services, and 13 electric locomotives for main-line trains working in that district.

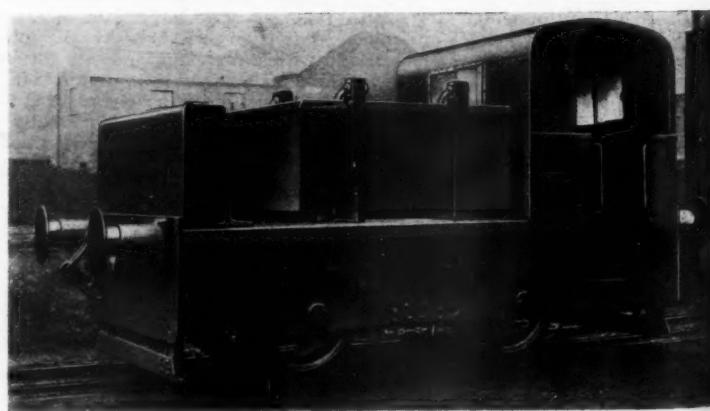
## A Battery Shunting Locomotive

THE Metrovick battery locomotive illustrated alongside, is a 13-ton shunting locomotive for handling a train load of 150 tons at 5 m.p.h. on a level standard-gauge (4 ft. 8½ in.) track of 600 yards in a works. The train comprises special wagons for transporting hot ingots, and the box seen in the front of the locomotive immediately above the buffers (on the left of the picture) is therefore filled with sand to act as a shield from the heat. Continual duty is required, and on this account the battery box is made for quick removal by crane and replacement by the spare box, so that one battery can be on charge while the other is in service.

The battery consists of 90 lead-acid cells of Exide TL11 type, with a rate capacity of 240 ampere-hours at the 5-hour discharge rate. Two standard axle-mounted tramway motors drive the axles through a gear reduction of 13 to 76. The 1-hour rating of each at the average battery voltage of 180 volts is 15 h.p., giving the locomotive 30 h.p.

We are indebted to the Metropolitan-Vickers Electrical Co. Ltd. and to the English Steel Corporation Limited for this information.

Battery locomotives for industrial haulage are playing an increasingly important part in assisting the war effort, but



Metrovick battery shunting locomotive with a removable battery box

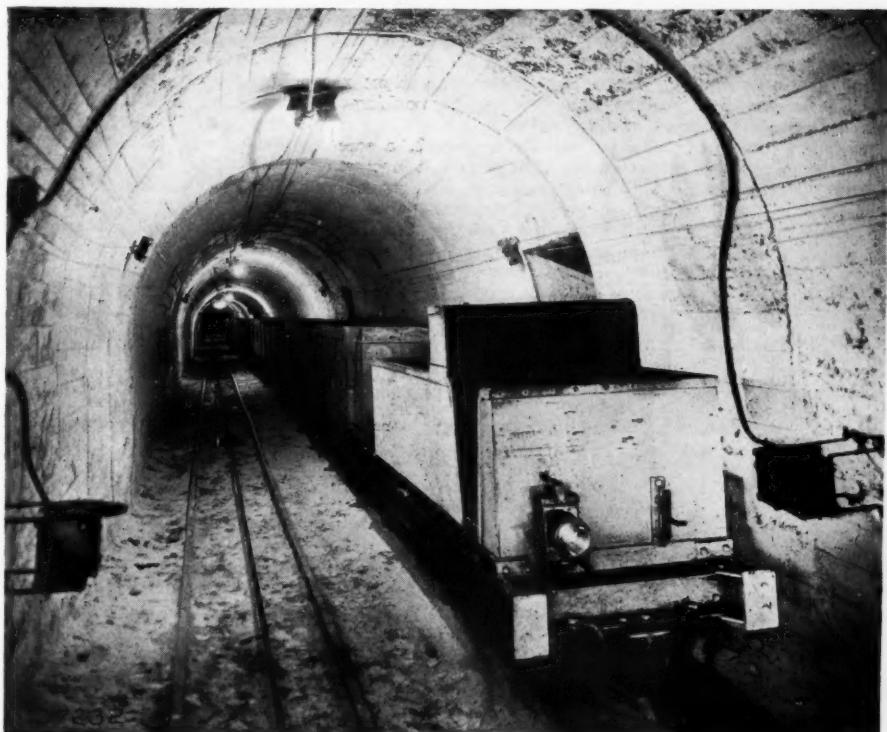
in present circumstances it is not permissible to mention the precise nature of many of the duties regularly performed by such units. An 0-4-0 standard gauge battery locomotive recently supplied by the British Thomson-Houston Co. Ltd. was illustrated and briefly described at page 501 of our issue of November 14, 1941.

## A Man-Riding Colliery Haulage

*Modern B.T.H. electrically-operated endless rope equipment at a coal mine*

MANY large colliery companies have been paying increased attention in recent years to the possibility of conveying miners between the pit bottom and the working district, with the intention of saving the considerable time and energy otherwise involved in the long and arduous walk through thousands of yards of low and unlit roadways. An installation recently placed in commission in a Midland coal mine is an excellent example of an electrically-driven man-riding haulage, and shows what equipment is necessary to guard adequately against the possibility of accidents.

The road is 2,300 yd. long, with a total fall towards the working district of 456 ft. including, before improvement, gradients up to 1 in 5. The roadway has been improved, straightened, and driven across drifts, so that the gradients now vary between 1 in 30 and 1 in 6·6. Firm smooth walls and roofs are assured by the use of steel arch girders and reinforced concrete, the effects of which can be seen in the first illustration. The electric lighting is, of course, available only at the termini.



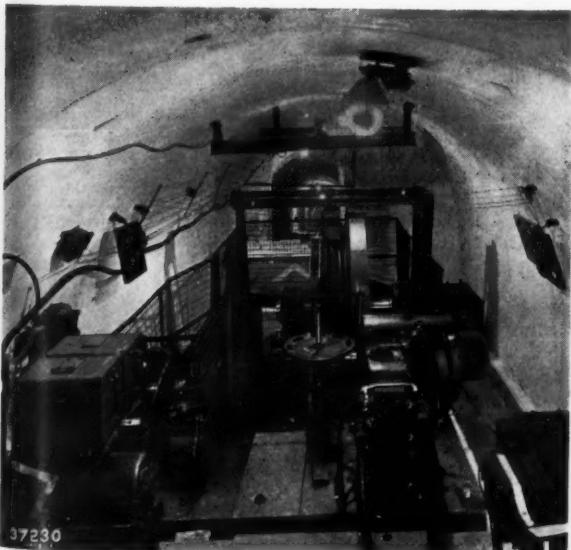
*One of the trains at the terminus*

Two trains are used, working in balance so that, as one train ascends, the other descends; one of them is shown at the out-bye terminus in the first illustration. Each train consists of 17 trams of special construction, having tall sides and arranged with low seats and side entry opening; the train is 190 ft. long, weighs 18½ tons, and is capable of carrying 136 men. There is also a special brake tram at each end of the train, and the man in charge travels in whichever of these is in front, where he has control over the emergency brakes. The brake blocks are of special design and are arranged so that when applied they bear on the track and wedge the wheels at the same time. All the tram brakes are connected by rods extending to operating gear in the two brake trams. Front and rear lights are provided, and these are interchanged at the end of each journey by the man in charge of the track.

By reason of the undulations of the route, the trains require hauling over some parts of both journeys, so the haulage rope has to be endless, and tension is arranged through a loaded tail sheave. The haulage must be begun very steadily so as to give time for the tail sheave to take up the rope stretch. Each train is lashed at both ends to the rope. The diameter of the rope is 1 in. and its average speed is 8 m.p.h.

### Haulage gear

The second illustration shows the haulage engine, for which the mechanical parts were made by Walker Bros., and the electrical equipment by the British Thomson-Houston Co. Ltd. The main sheave runs at 32 r.p.m. and is coupled to the motor through double-reduction gearing. The rope runs straight from the top of the sheave to one of the tracks, but from the bottom it passes round two horizontal idler sheaves placed under the floor and then over a number of



*Haulage engine, showing 125 h.p. flameproof motor and control gear*

rollers to bring it into the correct position in the centre of the second track.

Buxton certified flameproof electrical equipment has been provided throughout, as the engine house is situated in the return airway, and comprises the following items: a three-phase 3,300 volt, 50 cycle, slip-ring induction motor having a one-hour rating of 125 h.p., 730 r.p.m.; an air-brake drum-type controller working in the rotor circuit; unbreakable rotor resistances; a draw-out type main switch, incorporating a transformer for the thruster supply; oil-immersed high-tension stator reversing contactors; a TKF 5005 flameproof electro-hydraulic thruster for brake operation; two limit switches; an overspeed trip switch; a backing-out switch, and a thruster control contactor.

Although the brakes can be applied by pedal, a screw-down, or a thruster-supported weight, it is not necessary for the operator to use the pedal except to ease the brake off steadily when starting up. As the thruster is so connected that it is de-energised at the same time as the motor, the weight falls and the main brake is applied whenever the drum controller handle is brought to the off position.

Pilot contacts for controlling the oil-immersed stator contactors are fitted in the rotor controller, so that full control of the haulage is obtained from the one handle only, and in moving this away from the off position the motor stator is connected to the supply in the appropriate direction, the

thruster is energised, lifts off the brake, and then on subsequent notches the rotor resistance is gradually cut out of circuit.

The thruster applies the brake if the main circuit-breaker opens through failure of the supply, overload on the motor, excessive speed, or over-travel. After a shut-down the circuit-breaker cannot be re-closed unless the drum controller is in the off position, which ensures that the brake is on.

Although thrusters are now being commonly used for haulage brake operation, the haulage described was the first to be fitted with a thruster having flameproof enclosure, and therefore the operation of the brakes has been observed with some interest. It is found that although the application of the brakes in the event of a stoppage occurs without undue delay, the inherent dashpot effect in the thruster gives remarkably smooth application, and we are informed that this fact has occasioned particularly favourable comment on the part of the colliery officials.

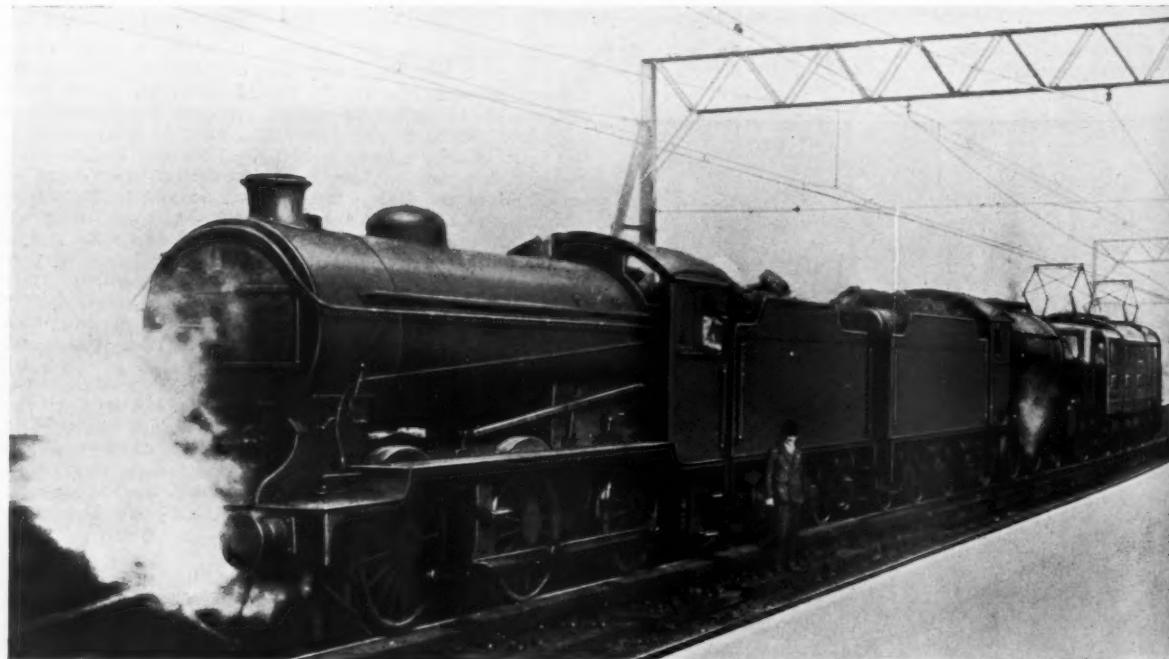
Ball and roller bearings are fitted to all the rope rollers idler sheaves, and tram wheels. When calculating the h.p. requirements it was felt that 30 lb. a ton would be a sufficient allowance for friction, and observations of power requirements since installation have shown that this was, in fact, reasonable.

We are indebted to the British Thomson-Houston Co. Ltd. for our illustrations and information.

## An Interesting Locomotive Test

**T**HE first of the L.N.E.R. main-line electric locomotives for the Manchester-Sheffield line, No. 6701, has been tested on the Manchester-Altringham line. Because of the severe gradients, regenerative braking has been provided as the most satisfactory method of checking speed down-hill. As the route, on which the tests were made, is level, gradient conditions had to be simulated, and the effect of a train overrunning the locomotive down the gradient was obtained in the manner shown in the accompanying illustration.

Two main-line steam locomotives were opposed to the electric locomotive and running at maximum boiler power they were unable to overcome the regenerative braking of No. 6701, so that the speed of the combination was considerably reduced. A large range of speeds and braking efforts was covered during the tests. The locomotive was built at the Doncaster works of the London & North Eastern Railway Company and equipped by Metropolitan-Vickers Electrical Co. Ltd.



L.N.E.R. main-line electric locomotive No. 6701 opposed by two steam locomotives for its regenerative braking tests

## AIR RAID DAMAGE AT PADDINGTON STATION

*A year ago the famous London terminus of the Great Western Railway was among the sufferers from enemy action. Nevertheless, the work of the station continued practically without interruption*

(See also illustrations on page 528)

LAST spring a large bomb exploded at Paddington Station, Great Western Railway, near the stationmaster's office, demolishing about 50 ft. of the adjacent 4-floor general offices, and seriously damaging the booking offices, stationmaster's office, the Post Office, and

company was able to re-open No. 1 platform for passengers within four days. Notwithstanding the fairly extensive damage shown in the photographs reproduced, the work of the station was carried on extremely well and, apart from the cancellation of a few early morning trains on the morn-



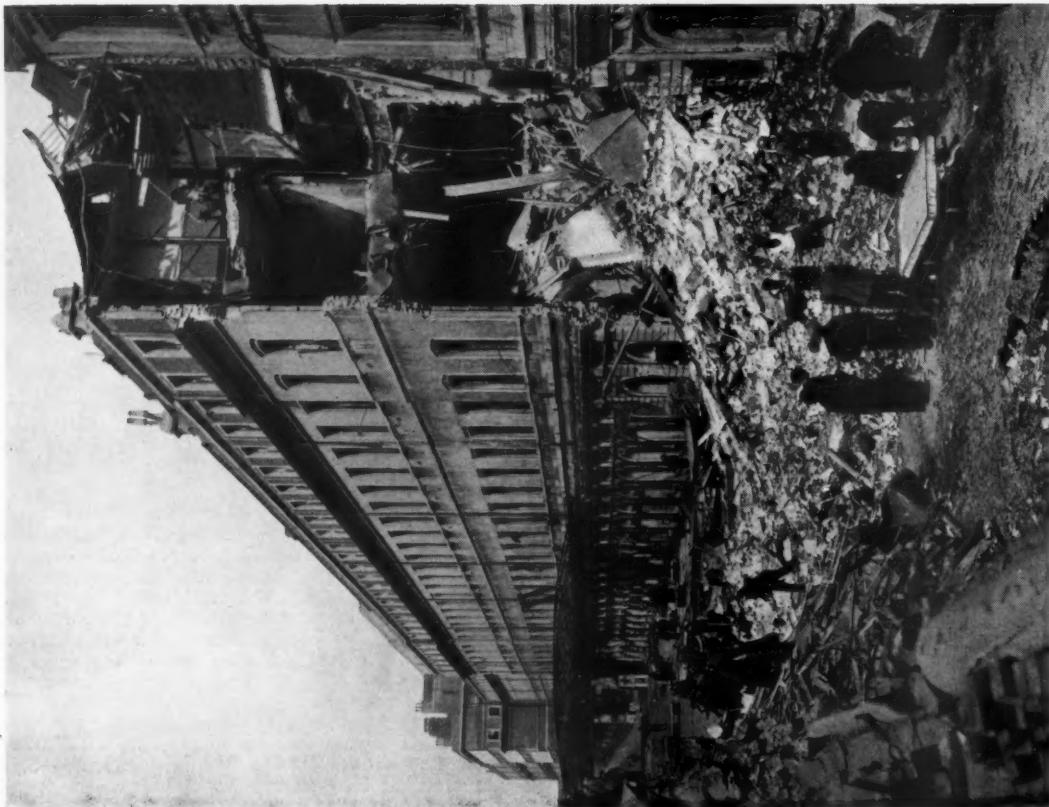
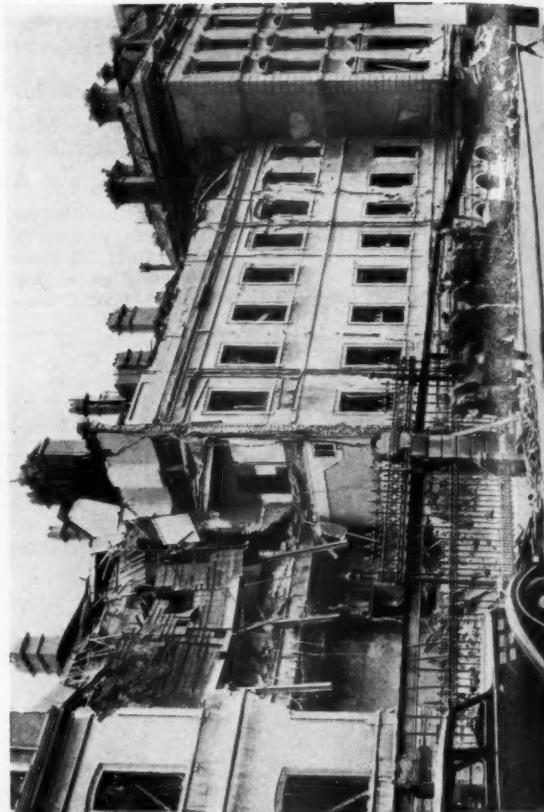
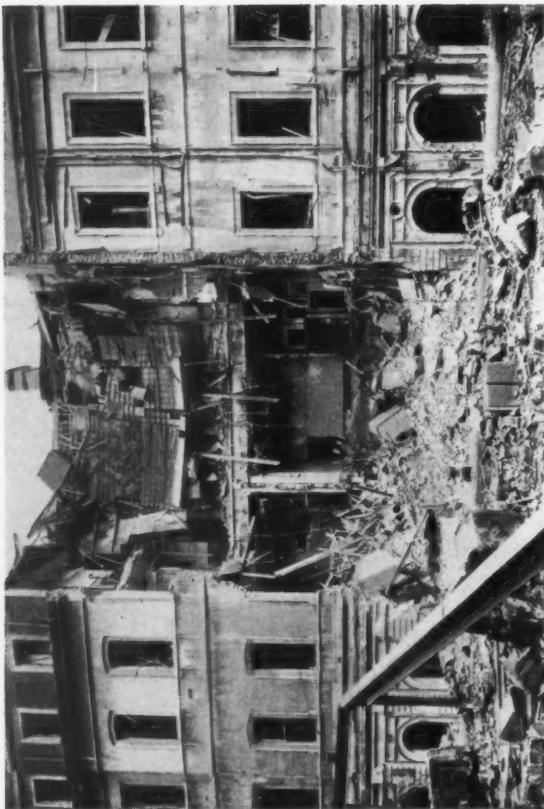
Paddington Station departure road from Praed Street end

various shops and kiosks on No. 1 platform. Unfortunately, the bomb exploded near the waiting room on No. 1 platform, which is the only room open for passengers throughout the night, and a number of casualties occurred. These were very efficiently dealt with by the company's A.R.P. and First Aid services, while rescue parties from the Paddington Borough Council also rendered valuable assistance. Within a remarkably short time large gangs of the company's engineering staff began clearance and demolition work. No. 1 platform was used for the removal of truck loads of debris, which was brought to the platform by strings of platform trolleys, and in three days 124 wagon-loads, or about 1,000 cubic yards of debris, had been removed.

As a temporary measure the tobacco kiosk situated on the Lawn, although damaged, was used as a booking office, but by the next day one of the main booking offices had been repaired sufficiently to enable it to be re-opened, and such rapid and commendable progress made with the clearance and temporary repairs to the platform buildings that the

ing the damage occurred normal train services were maintained with a remarkable degree of punctuality, which was the subject of many appreciative remarks from passengers.

**RAILWAY ELECTRIFICATION IN ROUMANIA.**—There are at present no electrically-operated railways in Roumania, excepting a few short private lines, such as Sebis—Moneasa, Hunedoara—Retisora, and Buzeu—Nehoias, as shown on the map at page 224 of our February 13 issue. The heavily-graded and busy Ploeshti—Brashov section of the Roumanian State Railways is now being electrified, however, and the work is scheduled for completion by the end of the present year. On this line two 4,400 b.h.p. diesel-electric locomotives are employed to haul heavy international expresses. The electrification of the 59-km. (37-mile) Bucharest—Ploeshti section, using single-phase current supplied by the Rhaetian programme, and of the 129-km. (80-mile) Brashov—Sighisoara section as the third step.



*Above : Paddington Station departure road from Eastbourne Terrace after air raid damage a year ago. Right (above) : Front view of damage from Eastbourne Terrace ; (below) : General view from Eastbourne Terrace*

*(See article on page 527)*

## THE TRAINING OF AFRICAN RAILWAYMEN

*The Kenya & Uganda Railways & Harbours Administration has a Transportation Training School at Nairobi through which pass African railway students*

THE Transportation Department of the Kenya & Uganda Railways & Harbours Administration has for years offered attractive opportunities and conditions of service to ambitious African youths. The standard of education and intelligence required for entry into the service has been raised gradually and candidates with the necessary qualifications are interviewed before selection by the Assistant Superintendent of the Line, Nairobi.

Those selected are sent to the Transportation Training School at Nairobi which is staffed by two European Instructors and an African Assistant Instructor. It has two classrooms; one is provided with Morse instruments and the other with a model railway. This railway has three stations, each equipped with full-size Tyer's Electric Tablet Instruments, signalling apparatus, engines, rolling stock, and a turn-table.

The student receives a salary sufficient to maintain himself adequately and to pay for the cost of his board and lodging in the Railway African Apprentices' Hostel, in comfortable conditions, under European supervision.

Students are grouped according to their adaptability for particular duties. The period of training ranges from four months, in the case of men who are to fill clerical appointments, to 6 months for telegraphists, and 7 months for Assistant Stationmasters. The training of the last-named is the most comprehensive, and, in their case, the school course is followed by a period of 3 months' practical training at a station. Selections for training in this grade are made with great care, for not only must a prospective stationmaster have a thorough knowledge of the rules and regulations governing the safe working of the railway, and a knowledge of the intricate accounting procedure, but he must possess a sense of responsibility.

The training at the school is intermingled with practical work on the model railway and visits to Nairobi and nearby stations. Students are thus enabled to become familiar with the practical working of the Tyer's Tablet instruments, the signalling system, as well as with the accounts books and forms, the various kinds of passenger tickets, luggage tickets, and parcels waybills.

In the initial stages students are given an outline of the main activities of the various departments of the railway administration. They are taught the geography of the whole system, and the services provided by rail, road, and steamer are explained to them. The curriculum is devised so as to maintain the greatest interest and to avoid tedium.

In telegraphy the alphabet in the Morse code must first be memorised, then the sending and receiving of letters is practised on the instruments. Progress is very gradual but a stage arrives when the African becomes so keen that he rigs up a home-made instrument in his quarters to practise after hours. To encourage this enthusiasm the administration now provides him with practice instruments to use at home. Correct formation and rhythm are gradually acquired until eventually the African is able to send and receive messages at a speed of 23 words a minute, the standard considered necessary. While the course is in progress, weekly tests



*A class of African students at the Nairobi Transportation Training School through which pass youths selected by the Kenya & Uganda Railways & Harbours Administration*

are made to gauge individual progress, and students unable to maintain a satisfactory standard are weeded out.

To the African the most interesting of the subjects taught in the school is train operating. The demonstrations given on the model railway, and visits to Nairobi and other stations, maintain his interest at a high level and he differs in no respect from the boy of every nation attracted by the different types of engines and vehicles, and by the signalling apparatus and "line-clear" instruments.

There is, however, a duller side to his training, and that is in the laborious assimilation of the complicated accounts procedure connected with the charging of goods, parcels, livestock, and passenger traffic. The tedium of this is relieved by dividing students into groups of three men representing different stations who conduct between them imaginary transactions in tickets, luggage, parcels, and goods traffic. Each group has to record particulars of the traffic dealt with, from the first transaction up to the preparation of balance-sheets and the compilation of monthly accounts.

This grouping of students is also carried into the trains operating section where a group takes over the model railway stations, passing trains to and from each of the three stations under the various "line-clear" systems in force. This work is carried out as it would be in actual working conditions. Students are trained in the more advanced methods of using the tablet instruments, and the working of the "absolute" and "permissive" systems before they leave the school. They become familiar with the complicated procedure governing the acceptance and transport of railway traffic, and even to that part of traffic which is accepted under special conditions. Their course, which includes instruction in the regulations dealing with accidents, and the operation of the Westinghouse brake system, aims at covering the widest field possible.

There is also a course for men who wish to be trained as guards, but recruitment for this type of work is usually made from men already in the services. On completion of the course students are examined in the various subjects, and those who succeed are posted to stations where it is considered they can most suitably complete their practical training.



*Above : Lorries fitted with half-track "caterpillars," in a railway yard*



*Right : Loading Army Stores into wagons at a Quartermasters' Depot*



*A military policeman on duty at a level crossing*



*Tanks which have travelled by rail arriving for manœuvres at Fort Knay, Kentucky*

Railways in the United States are playing a major part in the ever-growing war effort of that nation. Supplies destined not only for American forces but for those of the United Nations have to be moved, often great distances, over the metals of great railway systems. The accompanying illustrations are from photographs taken by the U.S. Army Signal Corps

## RAILWAY NEWS SECTION

### PERSONAL

#### G.W.R. STAFF CHANGES

##### Traffic Department

The following appointments are effective from June 1:—

Mr. W. J. Pepler, Divisional Superintendent, Exeter, to be Divisional Superintendent, Newport, on retirement of Mr. Trevor Roberts.

Mr. H. A. G. Worth, Assistant Divisional Superintendent, Birmingham, to be Divisional Superintendent, Exeter.

Mr. G. W. R. Sheppard, Chief Clerk, Divisional Superintendent's Office, Birmingham, to be Assistant Divisional Superintendent, Birmingham.

Mr. A. W. Sheppeney, Divisional Superintendent's Office, Worcester, to be Chief Clerk, Divisional Superintendent's Office, Birmingham.

The following appointments are effective from April 6:—

Mr. A. H. Bird, Chief Clerk, Superintendent of Line's Office, Paddington, to be Chief Clerk, Superintendent of Line's Office, Aldermaston.

Mr. E. N. Godfrey, Head of General Section, Superintendent of Line's Office, Paddington, to be Chief Clerk, Superintendent of Line's Office, Paddington.

The following appointment is effective from March 30:—

Mr. A. J. Robinson, Assistant to Superintendent of Road Transport, Paddington, to be Assistant Divisional Superintendent, Cardiff.

##### Chief Mechanical Engineer's Department

The following appointments are effective from April 27:—

Mr. W. H. Bodman, Divisional Locomotive Superintendent, Cardiff, to be Staff Assistant to Chief Mechanical Engineer, Swindon.

Mr. H. N. S. Edwards, Assistant to Locomotive Running Superintendent & Outdoor Assistant to Chief Mechanical Engineer, Swindon, to be Divisional Locomotive Superintendent, Cardiff.

Mr. H. T. Rendell, Assistant to Divisional Locomotive Superintendent, Neath, to be Divisional Locomotive Superintendent, Neath, on the retirement of Mr. B. Reynolds.

Mr. W. H. Morton, M.I.Mech.E., who recently retired from the position of General Manager, Great Southern Railways, has agreed at the request of the company to act for the company in an advisory capacity. Mr. Morton served his apprenticeship with Kitson & Co. Ltd., locomotive builders, of Leeds, and received a comprehensive technical education at Leeds University and at Leeds School of Science & Technology. On completion of his apprenticeship, he was employed by Kitson & Co. Ltd. as a leading draughtsman, later becoming Works Manager with the same company. In 1900 he was appointed Chief Draughtsman in the Locomotive Depart-

ment of the Midland Great Western Railway of Eire, and after filling the successive positions of Works Manager and Assistant Locomotive Engineer, eventually was appointed to the position of Chief Mechanical Engineer of that company. He acted in that capacity from 1915 to 1924. In the latter year, on the amalgamation of railways in Eire to form the Great Southern Railways, Mr. Morton was appointed to the position of Deputy Chief Mechanical Engineer of the new company and, in April, 1929, became Chief Mechanical



**Mr. W. H. Morton, M.I.Mech.E.,**

Former General Manager,  
Great Southern Railways, Eire, 1932-41

Engineer. He was appointed General Manager, Great Southern Railways, in April, 1932. Mr. Morton was Chairman of the Irish Central Wages Board for nine years and was a member of the Departmental Committee set up in 1925 by the Irish Free State Government to report on the system and law of workmen's compensation. On several occasions he acted as Advocate for the Associated Irish Railway Companies before the Irish Railways Wages Board. He is a Member of the Institution of Mechanical Engineers; Director, Transport Supplies Co. Ltd. (subsidiary of Great Southern Railways Company); Vice-President of Associated British & Irish Railways, Inc., New York; Member of Irish Committee, World Power Conference. Mr. Morton was also a Member of the Board of Aer Lingus Teoranta (Irish Air Services) from its inception in 1936 until 1941.

#### INDIAN RAILWAY STAFF CHANGES

Mr. R. E. Marriott, V.D., has been confirmed provisionally as General Manager, E.I.R.

Mr. T. G. Creighton has been confirmed as Deputy Chief Controller of Standardisation (Mechanical), Railway Board.

Mr. B. C. Drummond has been appointed to officiate as Divisional Superintendent, N.W.R., as from January 3.

Dr. C. D. Newman has been appointed to officiate as Chief Medical & Health Officer, N.W.R., as from January 8.

Dr. P. C. Datta has been appointed to officiate as Chief Medical Officer, Bengal & Assam Railway, as from January 3.

The services of Mr. H. M. R. Morse, Deputy Chief Mechanical Engineer, N.W.R., have been placed at the disposal of the Defence Department, as from January 3.

Mr. A. E. Howell has been appointed to officiate as Deputy Chief Mechanical Engineer, N.W.R., in place of Mr. Morse, and as from the same date.

#### BURMA RAILWAY STAFF CHANGES

Mr. W. H. Chance, V.D., has been confirmed as Chief Railway Commissioner.

Mr. E. I. Milne has been confirmed as Traffic Manager, Burma Railways, as from February 3.

Mr. S. C. Bryant has been confirmed as Deputy Traffic Manager (Commercial), Burma Railways, as from February 3.

Mr. E. L. Manley has been appointed as Government Inspector of Railways in Burma in succession to Major Gardiner, who has reverted to military duty.

Mr. Ashton Davies, Vice-President, London Midland & Scottish Railway, has suffered a sad bereavement by the death through an accident on active service, of his only son. The following appeared in the Deaths on Active Service column of *The Times* on April 25:—

DAVIES.—In April, 1942, through accident in the Middle East, LIEUTENAANT RAYMOND GEOFFREY DAVIES, LL.B., Royal Artillery, only son of Ashton Davies, C.V.O., O.B.E., and Mrs. Davies, "Busk," St. Annes-on-Sea, aged 25 years. (Libya—Greece—Crete—Libya.) In loving memory. Memorial Service at The Drive Methodist Church, St. Annes-on-Sea, 11 a.m., Monday.

Mr. Raymond Davies had not embarked on a railway career, but before enlistment was a solicitor by profession, and an Assistant Town Clerk of Blackpool.

Mr. G. H. Wilson has been elected Chairman & Managing Director of Laurence, Scott & Electromotors Limited in succession to Captain G. S. Scott. Mr. Wilson has been a member of the board since 1922. Mr. E. Pinckston and Mr. F. Lee, who have both held executive positions in the company's organisation for many years, have been appointed

May 1, 1942

directors. Mr. A. Tedcastle, formerly Assistant Secretary, has been appointed Secretary to the company.

Mr. R. G. Scarsbrook, Estate Assistant to the Surveyor & Estate Agent, who, as we recorded in our April 10 issue, has been appointed Principal Assistant to the Surveyor & Estate Agent, Great Western

division amounts to some 20 million tons a year. A large amount of this tonnage, together with that from the neighbouring South Wales divisions, is for long-distance destinations in England, and passes out by the three main routes, *via* the Severn Tunnel, *via* Gloucester, and *via* Hereford. On the average, about 31,000 loaded wagons, conveyed on about



**Mr. R. G. Scarsbrook**

Appointed Principal Assistant to the Surveyor & Estate Agent, G.W.R.

Railway, entered the service in the District Estate Office, Oxford. He was appointed Chief Clerk, Bristol, in 1911 and was transferred to the Head Office, Paddington, in 1915. He joined the Inns of Court O.T.C. and he subsequently obtained a Commission in the Royal Artillery and saw service in France from 1917 to 1919. After demobilisation Mr. Scarsbrook was appointed Chief Repairs Inspector, a year later Chief Clerk, and in 1929 Estate Assistant to the Surveyor & Estate Agent. Mr. Scarsbrook is a Fellow of the Chartered Surveyors' Institution.

Mr. Trevor Roberts, Divisional Superintendent, Newport, Great Western Railway, who is retiring at the end of May, was born at Malpas, Monmouthshire. He was educated at Christ College, Brecon, and joined the Great Western Railway Company's service in the Divisional Engineer's Office at Newport in 1894. He passed through a period of apprenticeship in Swindon Locomotive Works, and ten years later was transferred to the staff of the Superintendent of the Line, where he was engaged mainly with the working of freight trains all over the system. After some six years in this capacity he was, in 1910, transferred to South Wales as Outdoor Assistant to the Divisional Superintendent at Swansea. Mr. Roberts held that post until 1921, when he went to Cardiff as Assistant Divisional Superintendent; he became Divisional Superintendent at Pontypool Road in May, 1922, and, in 1924, was appointed Superintendent of the then newly-formed Newport Division. This division is concerned mainly with the handling of traffic arising in the coalfield, from heavy industrial plants, and at the company's docks in South Wales. The freight tonnage forwarded and received in the



**Mr. Trevor Roberts**

Divisional Superintendent, Newport, G.W.R., 1924-1942

690 trains, are despatched from the Newport Division by these three routes each week.

Mr. Walter Jewkes, of Oldwinsford, Stourbridge, who left £133,227, has bequeathed £500 to the Railway Servants' Orphanage.

Mr. M. S. Hatchell, Works Manager, Eastleigh Carriage & Wagon Works, who, as recorded in our April 17 issue, has been appointed Works Manager, Ashford,



**Mr. A. J. Allenby**

Appointed Divisional Storekeeper, Scotland, (St. Rollox) L.M.S.R.

Southern Railway, was educated at Haileybury College and began his engineering career as a pupil under Mr. Billinton at Brighton Locomotive Works. After undertaking inspection duties as an Assistant to Mr. R. E. L. Maunsell, he was appointed Assistant to the Works Manager at Eastleigh Locomotive Works in 1928, and in 1938 was transferred to



**Mr. M. S. Hatchell**

Appointed Works Manager, Ashford, Southern Railway

Ashford as Assistant Works Manager. In 1941 he was appointed Works Manager, Eastleigh Carriage & Wagon Works, and was later seconded for liaison duties in connection with special work being undertaken by the railway companies.

Mr. A. J. Allenby, Resident Storekeeper, Locomotive Stores, Crewe, L.M.S.R., who, as recorded in our April 17 issue, has been appointed Divisional Storekeeper for Scotland at St. Rollox, as from June 1, entered the service of the old Midland Railway Company, Derby, in February, 1908. He was appointed Assistant Resident Storekeeper, Locomotive Stores, Derby, in July, 1916, and eleven years later became Resident Storekeeper, Locomotive Stores, Derby. In January, 1934, Mr. Allenby was appointed Resident Storekeeper, Locomotive, Bridge & Station, Electrical, Signal & Telegraph Stores, Crewe, which position he relinquishes on taking up his present appointment.

#### L.N.E.R. APPOINTMENTS

The L.N.E.R. announce that Mr. T. E. Heywood, Mechanical Engineer, Scotland, will retire at an early date, and the directors have made the following appointments:—

Mr. L. Reeves, Locomotive Works Manager, Darlington, to be Mechanical Engineer, Scotland.

Mr. K. S. Robertson, Assistant Mechanical Engineer, Scotland, to be Outside Carriage & Wagon Assistant to the Chief Mechanical Engineer, Doncaster.

Mr. J. C. Spark, Assistant to Works Manager, Cowlairs, to be Works Manager, Cowlairs.

Mr. G. C. Gold, Assistant Locomotive Works Manager, Darlington, to be Locomotive Works Manager, Darlington.

## TRANSPORT SERVICES AND THE WAR—137

**Bus transport in Scotland—More volunteer bus conductors—The new restricted areas—German travel prohibition—Air raid precautions in Philadelphia—Further opening of the Nordland Railway, Norway**

Before the war there were about 6,000 public service vehicles in Scotland, against about 5,300 now. Yet, despite this reduction, buses are today carrying 25 to 30 per cent. more passengers on longer journeys, with a cut in fuel of something like 15 per cent. This information was issued recently by Mr. Archibald Henderson, Scottish Regional Transport Commissioner.

### Volunteer Auxiliary Conductors at Bristol

Many important towns in the North of England and in Scotland have introduced the use of volunteer auxiliary conductors to expedite traffic during the peak hours, as has been recorded from time to time in our columns, but the system has not been adopted to any great extent in the southern part of England. The Bristol Tramways & Carriage Co. Ltd. has now found it desirable, however, to adopt a similar course, and the first volunteer auxiliary conductors began their work on March 30. They are identified by white badges, 2 in. in dia., with a blue circle inside of  $\frac{1}{2}$  in. dia.; the lettering is in black. One of these is reproduced herewith. Volunteers are not required to pay a fare if they present themselves at a time when a bus is well loaded and perform their duty on the platform. They are required to render similar services to those allocated to volunteers in other parts of the country, namely, loading and unloading the bus while the regular conductor (or conductress) is engaged on fare collection. Major F. J. Chapple, the General Manager of the Bristol Tramways & Carriage Co. Ltd., informs us that the system is working fairly well.

So far as we can gather, two difficulties have revealed themselves in connection with the use of volunteer auxiliary conductors. One is that some regular conductors and conductresses do not welcome the assistance, possibly because they regard it as affording

a means of spying upon them to make sure that all fares are collected. The other is that some auxiliary conductors attach more importance to travelling without paying a fare than to rendering service, with the result that attempts are sometimes made to board a bus and "act as an auxiliary conductor" in order to secure a free ride, when actually the vehicle is so lightly laden that their services are obviously supererogatory.

### Transport Developments in Free China

After the Chinese Government moved to Chungking as the wartime capital of China, an extensive programme of developing communications in Western China was at once put into execution, and reference has been made from time to time in our columns to the progress of this work. The struggle of Free China against the Japanese invader has now lasted nearly five years, and Mr. V. K. Wellington Koo, the Chinese Ambassador in London, outlined in a B.B.C. broadcast on April 12 the enormous strides which have been taken already in providing modern transport in the areas under the control of Chungking. Within two years of the transfer of the capital, 6,000 post offices were added, and 30,000 miles of telegraph lines were established. The enemy took away 20,000 miles of long-distance telephone lines, but Chinese engineers set to work at once, with the result that today the facilities for telephone communication in Free China surpass the total mileage which existed in the whole country before the invasion. New railways are being constructed rapidly and over 700 miles have already been opened to traffic. The experience of railway building in the throes of war has been at times heart-breaking. When the Japanese occupied North Indo-China, the Chinese were obliged to abandon the Nanning line, which was to connect with the French railway from Haiphong, and which had just been completed. More recently again, the Yunnan-Burma Railway, in which great hopes were placed, had also to be suspended as a result of the war in Burma. But these misfortunes have not discouraged the Chinese people from redoubling their efforts to develop the means of transport, and railway building continues in other parts of Free China. Over 3,000 miles of motor roads have been completed, and another 3,000 are under construction. To supplement the facilities of road



## IS YOUR JOURNEY REALLY NECESSARY?



RAILWAY EXECUTIVE COMMITTEE



UNITED IN SUPPORT OF THE MINISTRY OF WAR TRANSPORT'S ROAD SAFETY CAMPAIGN BY THE TILLING GROUP OF COMPANIES



UNITED IN SUPPORT OF THE MINISTRY OF WAR TRANSPORT'S ROAD SAFETY CAMPAIGN BY THE TILLING GROUP OF COMPANIES

Above : Two of the Fougasse posters issued in support of the Ministry of War Transport's Road Safety Campaign by the Tilling Group of Companies. These complete the series of reproductions in our columns

Left : The latest Railway Executive Committee newspaper advertisement and poster (a Bert Thomas design) to discourage travel



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equipment has been kept on a par with that of any other system. To-day the number of locomotives owned is 26, and there are 1,450 wagons, with a capacity of 50,000 tons. The safety record is equal to that of any other railway in Canada or in the United States.

#### U.S.A. Tram Lines for Salvage

Various cities in the U.S.A., including Atlanta, Seattle, and Bellingham, have authorised the removal of abandoned tram lines to provide iron and steel scrap for armament purposes. It is expected that 33 miles of unused track can be taken up in Atlanta; the work will be undertaken by the Work Projects Administration, and the sale price for the metal is approximately \$70,000. The Georgia Power Company has agreed to give the rails to the city, the sum of \$70,000 applying as the city's share of repairing costs. Seattle has 16,000 and Bellingham 12,000 tons of abandoned rails. The W.P.A. will provide the labour for removal of the rails and for re-surfacing.

#### Rail and Road Co-ordination in Hungary

Co-operation between rail and road services in Hungary has recently been placed on a new basis. Road hauliers are henceforward operating exclusively on account of the Hungarian State Railways, and the railway station officials are authorised to pass on to road transport any consignment of goods for which they deem road transport more convenient. Road hauliers are thus excluded from undertaking services on their own account except over distances of less than 20 km. (12½ miles). On the other hand, road hauliers are guaranteed by the State Railways a minimum yearly income corresponding to a yearly performance of 24,000 km. (14,900 miles) a motor lorry, and of 20,000 km. (12,420 miles) a trailer. Industrial and commercial undertakings operating their own road transport services are entitled to continue to do so.

#### Further Opening of the Nordland Railway, Norway

The section from Elsfjord to Mo of the Nordland Railway was opened to provisional traffic for passengers and goods on March 20. It is being operated by the construction department. The length of this section is 50 km. (31 miles), and there are four intermediate stations.

At the time of the German invasion of Norway this railway extended only as far north as Namsos, but work was in hand from Grong (inland from Namsos) on the extension right up to Bodø, and in 1939 the Norwegian authorities announced their intention of completing and opening the 196 km. (122-mile) extension from Grong to Mosjøen in the summer of 1941. Actually the Norwegians

themselves had already pushed forward construction work to the extent that a few days before the German invasion it was officially announced that work had been accelerated sufficiently to enable the section to be opened during the autumn of 1940. This was recorded at page 568 of our issue of April 19, 1940, in a communication from our Norwegian correspondent which was despatched on the day before the German invasion. The German forces rapidly completed the work so that traffic was begun during the summer and the opening from Grong to Mosjøen was recorded at page 234 of our August 30, 1940, issue.

The further section of the Nordland Railway from Mosjøen to Elsfjord (26 miles), with one intermediate station and four halts, was opened to all classes of traffic on March 15, 1941 (see page 67 of our issue of July 18, 1941).

At Mo there is an existing short length of railway to Nævernes, which forms part of the route to the further north.

#### Belgian Motor Traffic Reduced by 75 per cent.

As compared with 1937, when Belgium had 202,000 motor vehicles (including 74,000 lorries) in service, the motor traffic now has dwindled by more than 75 per cent., since only 44,797 motor vehicles were operating in Belgium at the end of 1941. Of these, about 15 per cent. (or 6,023) were fitted with producer-gas plants, while the remaining 38,774 vehicles (including 20,878 lorries) were still operating on liquid fuel.

#### Petrol and Oil Restrictions in Rhodesia

To conserve supplies in Southern Rhodesia, the Government imposed restrictions on the sale of petrol as from January 2. The oil companies reduced their supplies to all consumers by 25 per cent., and the sale of petrol was confined to between 8 a.m. and 5.30 p.m. on Mondays to Fridays, and 8 a.m. and 1 p.m. on Saturdays; all sales had to be for cash.

From April 1, 1942, no person is permitted to convey for reward any person or goods between two places by any vehicle consuming petrol, paraffin, diesel oil, or fuel oil, over routes along the main railway line between Umtali and Plumtree. This was designed to stop the road transport services conveying goods in competition with the railways, particularly between Umtali and Salisbury and between Salisbury and Bulawayo. Similar restrictions on the sale of petrol have been imposed in Northern Rhodesia. Petrol rationing was introduced in the Union of South Africa in February; the allowance was based on 400 miles a month. Coupons are issued through the local post offices.

## The Kristianstad-Hässleholm Railway

The Kristianstad-Hässleholm Railway, with which the East Skåne line is combined and worked as a single undertaking, is an important standard-gauge line in Sweden, 263 km. (164 miles) long, and owns 34 steam locomotives, 3 petrol railcars, 52 carriages, and 762 goods wagons. It also operates road-motor services with 27 buses and 1 lorry. The report for 1941 shows a total profit, with the amount brought forward from 1940, of 380,349 Kronor, compared with 410,276 Kr. for the latter year. A dividend of 6 per cent. has been paid, absorbing 136,956 Kr., and leaving 57,000 Kr. for taxation and other charges, 40,000 Kr. for reserve, 79,913 Kr. for improvements, and 48,479 Kr. to be carried forward. Railway traffic receipts came to 5,124,728 Kr., and road transport receipts to 474,805 Kr. Working costs amounted to 3,920,341 Kr. for rail traffic and 390,868 Kr. for bus services, giving a surplus of 1,204,386 Kr. and 83,937 Kr. respectively.

The principal items of expenditure for the rail services were 1,056,965 Kr. for actual working, 1,842,362 Kr. for locomotives and rolling stock, and 669,784 Kr. for permanent way and works. A certain amount of rolling stock was hired at a cost of 106,931 Kr. The profit and loss account shows a total of 1,344,150 Kr. and the credit side shows income from rents and subsidiary activities totalling 55,827 Kr., supplementing the rail and bus surpluses. Renewals of buildings, bridges, track, station equipment, and signalling apparatus

absorbed 47,920 Kr. and rolling stock 46,521 Kr.; locomotives took 15,726 Kr., and passenger vehicles 10,191 Kr. The road services absorbed 62,012 Kr. for renewals and repairs. To these figures must be added rates, taxes, and duty payments totalling 442,628 Kr.; the rent paid for the right to work the East Skåne line, 380,000 Kr., and various miscellaneous outgoings took 8,040 Kr. The year's profit was 357,029 Kr. plus 23,320 Kr. brought forward. The balance sheet shows a considerable increase in investments, but the value of the fixed portion of the undertaking has varied but little, and is put at 7,424,374 Kr. Value of stores increased and no doubt it was considered prudent in present circumstances to acquire a quantity while prices permitted. The company's peat stocks are now valued at 63,772 Kr. against 13,472 Kr. at the end of 1940. There are now no uncompleted engineering works. Loans and debt charges have been reduced during the year; the share capital is 2,282,600 kr. and the reserve, and improvement funds are maintained at the same total of 1,265,086 Kr., but the amount set aside to meet increased taxation has risen from 50,000 Kr. to 225,000 Kr. Renewal fund now stands at over 4½ million Kronor.

The accounts of the East Skåne Company show a total profit of 13,398 Kr., inclusive of 10,101 Kr. brought forward, and practically the same amount is put to the reserve fund and 3,398 Kr. is carried forward. Revenue, of course, was derived principally from the payment received from

the larger company, 380,000 Kr., and various other sources, such as rent and interest, brought in 9,841 Kr. Renewal charges took 385,802 Kr. and 744 Kr. went to miscellaneous expenses. The fact that the Swedish Government is evidently making it a settled policy to absorb all the private lines in due course gives some interest to the results achieved by this remaining important separate concern.

**NEW DRIVE FOR WASTE PAPER.**—The success of the £20,000 waste paper competition in January has led the Waste Paper Recovery Association to organise another, but on different lines, for the three months, May, June, and July. All local authorities in England, Wales, and Northern Ireland have been divided into three groups—borough, urban and rural council areas—for three grades of competition. Prize money totalling £10,000 will be distributed as follows: £2,500 to each group in seven prizes, namely, £1,000; £500; £350; £250; £200; £150; and £50. The remaining £2,500 has been allocated to Scotland. Disposal of the prizes is left to the successful authorities, but it is generally agreed that local charities will benefit. In the previous contest the prize money had to be divided between national and local charities. The judges are Sir Vyvyan Board, Chairman, Salvage & Recovery Board of the Ministry of Supply; Miss Megan Lloyd George, M.P.; and Mr. S. T. Garland, General Manager, Waste Paper Recovery Association.

## Government Control of Railways

### Estimates of revenue receipts and expenses for the year 1941

On April 22 the Ministry of War Transport issued a White Paper (Cmd. 6349) giving estimates of the total revenue receipts and expenses, and the resultant net revenue of the controlled undertakings for the year ended December 31, 1941. This was as follows:—

In Command Paper 6252, presented to Parliament by the Minister of Transport in February, 1941, estimates were given of the pooled receipts and expenses and the resultant net revenue of the controlled undertakings for the year ended December 31, 1940. These estimates were compiled on the basis of financial arrangements made between the Minister, the four amalgamated railway companies and the London Passenger Transport Board and outlined in Command Paper 6168, issued in February, 1940.

With effect from December 31, 1940, the financial arrangements were revised as indicated in Command Paper 6314, issued in September, 1941. The terms of the Control Agreement are set out in full in an Order (S.R. & O. 1941, No. 2074) made by the Minister of War Transport on December 19, 1941, under the Railways Agreement (Powers) Act, 1940.

Estimates for the first complete year under the revised financial arrangements show that the pooled receipts and expenses

were approximately as shown in the following table:—

	Year ended Dec. 31, 1941	£
Receipts and expenditure of the controlled railway companies and joint lines in respect of railway working and of the London Passenger Transport Board in respect of railway working and road services.		
Receipts : Passenger ...	132,106,000	
Freight ...	158,826,000	
Miscellaneous ...	2,903,000	
Total ...	293,835,000	
Expenditure ...	226,636,000	
Net receipts ...	67,199,000	
Other receipts and expenditure included in the pool (net) ...	Dr. 2,074,000	
Net revenue of the pool ...	£65,125,000	

The figures are subject to examination on behalf of His Majesty's Government. Neither receipts nor expenditure are comparable with those published in 1940, in particular by reason of the increased level of rates and charges, the increased rates of wages and prices of materials, and the non-inclusion of any charge for war damage in the figures for 1941.

The item "Other receipts and expenditure included in the pool (net)" includes the net revenue from ancillary businesses (e.g., steamboats, docks, hotels, collection and delivery of parcels and goods) and rents, interest, and other miscellaneous items.

The fixed annual sums payable by the Government to the controlled undertakings for the year 1941 amount to £43,469,000.

## QUESTIONS IN PARLIAMENT

Below are summarised Answers to Questions in Parliament affecting transport. The Minister concerned and the date of the Answer are given in parentheses

### Transfer of Railway Officials

From time to time, it is necessary to transfer railway officials, either temporarily or permanently, from one place to another. In such cases the railway companies do all they can to ensure that those transferred are suitably accommodated. I am not aware that difficulties have occurred and if particulars are supplied of any cases where difficulties have arisen and have not yet been overcome, the necessary enquiries will be made.—(Mr. P. J. Noel-Baker, Joint Parliamentary Secretary, Ministry of War Transport, April 21).

### Regional Administration

No representatives of the Minister of War Transport are stationed at the Headquarters of the Regional (Civil) Commissioners. Close liaison is, however, maintained between the commissioners and the Regional Transport Commissioners and the Regional Port Directors appointed by the Minister of War Transport.—(Mr. P. J. Noel-Baker, April 21).

### Travelling Accommodation for the Forces

Instructions have been given to all railway staff that if no seats are available in third class compartments, members of the Forces may be allowed to occupy empty first class seats provided these are not likely to be required for first class passengers joining en route. The administration of these instructions must be left to the railway staff, which alone is able to know what accommodation is available on the train, and I am assured that it is carrying out its duties in a satisfactory way. The withdrawal of first class accommodation

during the war has been considered more than once, and, in fact, it has been effected for short-distance travel on a number of suburban lines around London. There are, however, very strong arguments against its general abolition, and these arguments have prevailed.—(Mr. P. J. Noel-Baker, April 22).

### Smoking in "Non-Smokers"

I have asked the railway companies to do all they can to see that the by-laws on the subject of smoking in railway carriages are observed. Non-smokers can assist by drawing the attention of railway officials to persistent contraventions.—(Mr. P. J. Noel-Baker, April 22).

### Canteen Facilities for Railwaymen

I am aware of the feeling among railwaymen, whose work takes them from home for irregular periods, that canteen facilities should be provided at lodging-away centres where hot meals can be obtained. The railway companies are taking active steps to establish canteens and cooking centres. They have also consulted my department on the question of providing hot meals for various classes of their employees (including those whose work takes them from home), and enquiries are being made as to how far existing British Restaurants and cooking depots can assist.—(Major G. Lloyd George, Parliamentary Secretary, Ministry of Food, April 22).

### Transit of Seed Potatoes

The tonnage of seed potatoes to be moved from Scotland to England is considerably larger than that of last season. Thanks to the carefully planned allocation

of this traffic to the available means of transport only a very small proportion now remains to be conveyed. No difficulty is expected in completing the movement before the end of the season. (Mr. P. J. Noel-Baker, April 22).

## Parliamentary Note

### Indian Railway Bill

The Bombay, Baroda & Central India Railway Bill was read a Third Time and passed in the House of Commons on April 21.

## Staff and Labour Matters

### Road Haulage Wages

The Road Haulage Central Wages Board has issued new wages proposals for the Road Haulage Industry which include new rates for workers, other than statutory attendants under 18 years of age and drivers, as follow:—

Years of age	Long distance and		
	Grade 1	Grade 2	Grade 3
21 or over ...	71 6	66 6	71 6
20 and under 21 ...	56 0	53 0	50 0
19 .. .	48 6	45 6	42 6
18 .. .	43 6	40 6	37 6
17 .. .	33 0	31 0	29 0
16 .. .	28 0	26 0	25 0
15 .. .	24 0	23 0	22 0
14 .. .	20 0	19 0	18 0

For statutory attendants under 18 years of age the rates proposed are as follow:—

Years of age	Long distance and Grade 1		
	Grade 2	Grade 3	37s. 6d.
Under 18 ...	43 6	43 6	37 6
18 and under 19 ...	49 3	46 6	43 6
19 .. .	55 3	51 6	48 6
20 .. .	63 3	59 0	56 0

It is proposed that drivers under 21 employed on vehicles carrying loads of 1 ton or less in the London area, and 30 cwt. or less outside London, should be paid according to age, and not according to the length of time they have been employed in the trade. The rates proposed are:—

Years of age	London		
	Grade 1	Grade 2	Grade 3
Under 18 ...	43 6	43 6	40 6
18 and under 19 ...	49 3	46 6	43 6
19 .. .	55 3	51 6	48 6
20 .. .	63 3	59 0	56 0

Other proposals include:—

(1) Drivers of vehicles drawing trailers to be paid an extra 1s. a day if the gross laden weight of the vehicle and trailer exceeds 22 tons, or 24 tons if the drawing vehicle is a steam wagon.

(2) Abolition of the existing provision whereby drivers hauling agricultural produce may be paid at a lower rate than other drivers.

(3) The substitution of 4 hr. instead of 5½ hr. as the guaranteed minimum for regular workers who work on Saturday and that time worked after 2 p.m. on Saturday by regular workers other than milk workers and workers engaged exclusively on the haulage of films shall be considered as overtime.

(4) Modifications of the existing provisions as to holidays and subsistence allowance.

(5) Alteration in the definition of milk worker.

(6) Improvements in the grading of certain districts.

The changes do not come into force until an Order is made by the Minister of Labour

## Government's Wartime Railway Policy

(From a Correspondent)

In offering criticism, it is as well to restate the facts—however well known they may be—which form the data on which the comment is based. In the present case, they are given, below, in chronological order:—

1921.—Railways Act passed, which included, *inter alia*, a provision fixing the net revenue to which the four main-line railways are entitled, if they could earn it, at £51,000,000 a year. This figure was arrived at after full consideration of all factors, political, commercial, social, and industrial.

1921-1939.—During this time, the railways passed through all the vicissitudes of disastrous slumps, alternating with periods of comparative prosperity, and of devastating competition, without ever reaching the standard revenue assessed by Parliament as fair and equitable.

September, 1939.—Government announcement of the taking over control of the railways during the war.

September, 1939, to 1940.—Uncertainty and suspicion as to Government's intentions, aggravated by the prolonged secret negotiations. Reflected by Stock Exchange values, which, for the four main lines fell from a total of £724,000,000 (1938 had been a very bad year for the full par value) to £1,100,000,000 to £534,000,000. The fall, though mainly in the junior stocks, was also felt in the prior charges. Much speculative gambling.

Early 1940.—Announcement of arrangement which provided for a minimum payment with a certain limited participation in any increased earnings. Partial recovery of confidence, reflected by increase in Stock Exchange values to £804,000,000.

Later in 1940.—News that Government was to reconsider the arrangement with the railways in light of national war damage scheme. More uncertainty, and loss of confidence. Stock Exchange valuations fell back to £631,000,000. More gambling.

September, 1941.—Announcement of new scheme, abolishing participation and establishing a fixed rental amounting to roughly three-quarters of the authorised standard revenue, leaving £78,000,000 of investment with no hope of return. No definite announcement on war damages. Stock Exchange valuation recovered to £788,000,000.

1941 (*generally*).—Repeated admonitions by Government to economise rail transport, because of pressure of war requirements, indicating that the railways were working to full capacity, and consequently, earning greatly enhanced revenues.

March, 1942.—Chancellor of Exchequer announced, in House of Commons, for financial results of railway working for 1941. Chancellor promised a White Paper with an estimate, and added that all profits in excess of the fixed rental will be paid into the exchequer.

The foregoing are the facts, to date, on which the deductions and criticism which follow are based.

### Deductions

(a) The first (or participation) arrangement was an effort to be fair, in that it did admit the right of the railways to a share in any increased revenues above the guaranteed minimum.

(b) The results of experience of the working of the participation arrangement showed that there was an increase of earnings which

would operate more favourably to the railways than had been foreseen.

(c) Political considerations thus made—in the opinion of the Exchequer—a review of the situation expedient, and the problem of the incidence of war damage was made the lever.

(d) Political considerations also brought the question of post-war ownership into new prominence, with a generally hardening tendency toward acquisition of the undertakings by some form of public ownership.

(e) With this in mind, the second (fixed rental) scheme was introduced and forced upon the railways, with the apparent object of depreciating the value of the properties, and so rendering their ultimate acquisition possible at a cheaper price.

These are the deductions. Now for the criticism: The changes of bases of arrangement, and the protracted private negotiations which preceded them, bred uncertainty, suspicion, and lack of confidence in the good faith of the Government; resulting in violent fluctuations of values, and wild speculative gambling. The furtive secrecy which to-day enshrouds the working results, and the reluctance of the Treasury to publish them (except as promised by the Chancellor, in the form of an "estimate" at some unspecified future date) have still further prejudiced confidence, and depreciated values.

To this plight, then, has the Government's policy of depreciation reduced the greatest single asset in the country; that it has lost its standing and solidity, and become the vehicle of speculation, to the great discomfiture and loss of its legitimate owners, and at, as I hope to show, little real profit.

### An Alternative Policy

As matters now stand, the Government is in the position of being the temporary lessee of a vast commercial undertaking which it (apparently) intends, at the expiry of the lease, to acquire for the country. Surely, in such circumstances, it is the Government's duty in the interests of the people—as well as being sound business—to maintain, and even improve the financial stability of the property it intends to acquire: since, in the end, it is the people who will benefit, or pay, whether in momentarily increased revenue, or in enhanced future value.

Such a result could be achieved easily, and cheaply, by a policy of stabilising the dividends of the junior stocks. An increase in the rental of about £5,000,000 a year (which after deduction of standard income-tax would mean, in cash, only £2,500,000 a year) would, if suitably distributed, enable some dividend to be paid on all classes of railway stock. There is no doubt that the railways are earning enough to do so, and still to return a handsome revenue to the Exchequer.

This, together with the Government's guarantee for the duration of the war, and until the final plan is evolved, would immediately restore public confidence, and stabilise the whole capital structure. The stocks would again become a "security" investment, as the stocks of so great a public asset should be; and speculative gambling would largely disappear. The capital appreciation which would follow would be real, and would, at a very conservative estimate, amount to at least £100,000,000. Estate duties alone, on this increase, as they fell in, would amount to a very considerable sum. The country's greatest single asset would be on a firm financial foundation.

Stockholders would feel that they had had justice, and the Government would have the virtuous feeling of comfort that it had given a square deal. Finally, it should be remarked that the total payment to the four main lines would still show an economy of over £8,000,000 a year on the approved standard revenue.

Since the foregoing was written, the Chancellor's promised White Paper has appeared showing the amazing net profit of more than £65,000,000. This represents an increase of £11,000,000 above the standard net revenue (including the L.P.T.B.) and shows a net profit to the Treasury, over and above the rental fixed by the Government and forced on the representatives of the proprietors, of the huge sum of £22,000,000, or more than 50 per cent.

The points made earlier in this article, that the railways were earning far more than the Government's rental terms (if they were fair) would indicate, are now fully substantiated. It is not difficult to guess the reason for secrecy and for delaying publication until six weeks after the Chairmen of the four main-line companies had faced their shareholders, with their explanations of how they had been compelled to accept the Government's offer.

**MOTOR VEHICLES IN CUBA.**—Recently issued particulars concerning the total number of motor vehicles in Cuba show that at the beginning of 1942 there were 49,541 units in service, compared with 47,235 and 45,586 at the beginning of 1941 and 1940 respectively. Distribution of registrations by types was as follows:—

Type of vehicle	Jan. 1, 1940	Jan. 1, 1941	Jan. 1, 1942
Motorcycles	347	418	447
Private motorcars	18,124	19,386	20,660
Motorcars for hire	9,555	9,416	9,102
Buses	2,785	2,847	3,402
Line cars	638	651	648
Demonstration cars	46	59	57
Repair service cars	39	41	40
Lorries	13,521	13,890	14,625
Hearse	316	318	337
School buses	165	176	200
Buses of welfare institutions	23	23	23
Total	45,586	47,235	49,541

In addition there were registered on January 1, 1942, 115 official motorcycles, 569 official passenger cars, 113 passenger cars belonging to members of the diplomatic and consular service, and 682 official lorries. During the year 1941, Cuba increased its imports of motor vehicles to 2,563 passenger cars and 1,737 lorries and buses, from 2,438 and 1,194 respectively, in 1940. All of the units were United States makes with the exception of two French passenger cars imported in 1940.

**BELGIAN CONGO TOURISTS.**—M. Moulart, Minister Plenipotentiary for Belgium in South Africa, has announced that Belgians on leave from the Congo may extend their visits by another month and a half under a regulation of the Belgian Congo Government issued recently. The regulation applies to civil servants, but it may be taken for granted that private firms will immediately follow suit. Between 1,000 and 1,200 people, at present holidaying in the Union, are affected. The Minister explained that the general rule in the Congo had been to grant 2½ months' leave every 18 months. While on leave employees received increased pay. In future they would receive four months' leave every two years and they continue to receive the increased pay. The recent extension of the Congo air service to the Union will provide a further much-needed means of communication between the two countries.

## NOTES AND NEWS

**Institution of Locomotive Engineers.**—The annual general meeting will be held on May 6, at 2.30 p.m., at the Savoy Hotel, London, W.C.2. Mr. O. V. S. Bulleid, the President, will be in the chair. Mr. Bulleid will also take the chair at the luncheon which will precede the meeting at 1 p.m.

**Scottish Waggon Co. Ltd.**—The liquidators of this company, now in voluntary liquidation, intimate a second and final distribution of assets of 6s. 11*1/10*d. for each £1 of paid-up capital. In December, 1940, shareholders accepted an offer for the company's railway wagons.

**W. Alexander & Sons Ltd. Capital Reduction.**—The Order of the Court of Session (the Hon. Lord Carmont) dated April 14, 1942, confirming the reduction of the capital of this company from £1,350,000 to £1,075,000 by the repayment to the holders of ordinary shares of capital to the extent of 5s. a share, was registered by the Registrar of Companies on April 17.

**Central S.M.T. Co. Ltd. Capital Reduction.**—Notice is given that the Order of the Court of Session (the Hon. Lord Carmont), dated April 14, 1942, confirming the reduction of the capital of this company (a subsidiary of Scottish Motor Traction Co. Ltd.) from £750,000 to £562,500 by the repayment to the stockholders of capital to the extent of 25 per cent. of their holdings, was registered by the Registrar of Companies on April 17.

**Great Southern Railways (Eire).**—For the 15th week of 1942 the Great Southern Railways (Eire) reports passenger receipts of £34,418 (against £45,779), and goods receipts of £65,114 (against £45,006), making a total of £99,532, against £90,785 for the corresponding period of the previous year. The aggregate receipts to date are passenger, £483,965 (against £522,825), goods, £908,296 (against £750,513), making a total of £1,392,261 (against £1,273,338).

**C. & S.L.R. Electric Locomotive No. 36.**—The former City & South London Railway electric locomotive No. 36, which for some years has been exhibited on a brick pedestal in the circulating area at Moorgate Station, Metropolitan Line, has recently been painted grey in order to preserve it. It was built in 1900 by Crompton & Co. Ltd. of Chelmsford. In preparation for exhibition, the locomotive was freshly painted in the once-familiar C. & S.L.R. yellow ochre livery, but this was destroyed when the engine was damaged in an air raid more than a year ago. Locomotive No. 36 was illustrated at page 339 of our issue for March 6, 1942.

**London Transport T.F.A. Stock.**—The London Passenger Transport Board has applied to Parliament for leave to introduce a Bill in the present Session for the following purposes:—(1) To empower the board for the purpose of redeeming the "T.F.A." Stock issued under the London Passenger Transport Act, 1933 (hereinafter called "the Act of 1933"), or of raising money for such redemption, to create and issue London Transport Stock (hereinafter called "the new stock") charged upon the undertaking and revenues of the board of a class different from the classes of stock named in Section 39 of the Act of 1933 and to make provision as to the order of ranking of the new stock in relation to other classes of London Transport stock; (2) to provide that the

new stock shall be redeemed at par not later than June 30, 1972, and may at the option of the board be redeemed (in whole or in part) on such earlier date or dates as the board with the approval of the Treasury may by the resolution creating the new stock determine.

**Agreed Charges.**—Forty-three more applications for the approval of agreed charges under the provisions of Section 37 of the Road & Rail Traffic Act, 1933, have been lodged with the Railway Rates Tribunal. Notices of objection must be filed with the Registrar of the tribunal on or before May 15.

**Road Accidents in March, 1942.**—The return issued by the Minister of War Transport of the number of persons reported to have died or to have been injured as a result of road accidents in Great Britain during the month of March last shows 550 deaths (compared with 836 in March, 1941), 2,894 seriously injured, and 8,792 slightly injured. Comparative figures for persons injured are not available for March, 1941.

**Dublin United Transport Debenture Stock.**—It is reported that the Dublin United Transport Co. Ltd. has given six months' notice to redeem the £700,000 of 5 per cent. second mortgage debenture stock on October 31 next at 102, plus accrued interest to that date. The stock is redeemable at par on November 1, 1949, or at 102 per cent. on any earlier date on six months' notice from the company.

**Canadian National Railways.**—Gross earnings during March last were \$28,706,000 an increase of \$5,177,994 over March, 1941 and operating expenses were \$22,282,393 an advance of \$3,686,442, leaving net earnings \$1,491,551 higher, at \$6,423,606. Aggregate gross earnings for the three months from January 1, 1942, were \$79,623,000, an increase of \$14,924,533, as compared with the similar period of 1941, and the net earnings of \$15,225,158, showed an improvement of \$4,533,593.

**Chinese Railway Bonds Drawn.**—The Hongkong & Shanghai Banking Corporation gives notice that bonds for £116,000 of the Chinese Imperial Railway 5 per cent. gold loan (Shanghai-Nanking Railway), were drawn, on April 7, at the bank's London office, 9, Gracechurch Street, E.C.3, and will become due for redemption at par on June 1, 1942. Interest thereon will cease to accrue on the bonds becoming payable and on provision having been made for their payment.

**Samana & Santiago Railway Co. Ltd.**—Because it is unable to pay its debts, this company, it is announced, has gone into liquidation. A meeting of creditors was arranged for April 29 to consider the question of a committee of inspection to act with the liquidator. The company was registered in Edinburgh in 1888 and operates 87 miles of 3 ft. 6 in. gauge railway in Santo Domingo, of which 80 miles belong to the company and 7 miles to the Macoris Railway Company. Debenture interest has been in arrear since June 30, 1928.

**Japanese Islands Linked by Rail Tunnel.**—A railway tunnel under the strait between Honshu (the main island of Japan) and Kyushu island is now stated to have been finished, and to have been traversed in March by a trial train hauled by an electric locomotive. This tunnel, which has been under construction for

about six years, links Shimonoseki (at the southernmost tip of Honshu) with Moji (the port on the northernmost point of Kyushu). It is announced from Tokio that regular service through the tunnel will be inaugurated in June.

**Aerial Cableways in Netherland India.**—Aerial cableways were introduced in the Netherlands East Indies in 1904. There are now about 60 or 70 at work, with very satisfactory results.

**Sleepers and Timbers.**—A meeting of the Permanent Way Institution will be held at the Temperance Institute, Southport, on May 9. Mr. N. W. Swinnerton will deliver a paper entitled "Concerning Sleepers and Timbers." He will deal with the quality, structure, treatment, and care of sleepers with special reference to the physical characteristics and mechanical wear which influence their life in the track.

**Rail Motor Coaches for Uruguay.**—The acquisition of 10 railway motor coaches by the Uruguayan State Railways (*Administración de los Ferrocarriles y Tranvías del Estado*) is provided by a law dated December 19, 1941, which authorises the Executive to issue bonds to be called State Railway 1941 Bonds in amount of 500,000 pesos for the purpose. The law provides that the motor coaches are to be purchased by public bidding.

**Light Railway Has Good Year.**—A dividend of 15 per cent.—an increase of 5 per cent.—was declared at the annual meeting of Leighton Buzzard Light Railway Limited, and it was stated that in the last four months of the year more traffic was carried than in any similar period in the company's 20 years' history. Mr. George King, presiding, said traffic receipts amounted to £11,468, an increase of £2,842. The increase was partly due to the fair way in which the sand merchants had met the company as to extra costs. Net profit was £1,991, after putting £500 to special reserve for permanent way repairs. A deposit in the Luton & Midland Building Society had been increased to £2,000, and altogether the company had a very successful year.

**Brussels Tramways.**—The Compagnie des Tramways Bruxellois records a substantial increase in gross receipts for 1941, to Belgian francs 326,030,000 compared with fr. 239,450,000 for 1940. This increase is due mainly to the discontinuance of the services of the Brussels Motorbus Company (in which the tramway company has a shareholding) and to the almost complete withdrawal of the Brussels motor taxi service, both results of the stringent shortage of motor fuel and rubber tyres. The first-named figure includes fr. 5,480,000 representing interest, proceeds from securities, and rent. Working expenditure, overhead charges, and taxation rose nearly by 50 per cent. to fr. 283,770,000 in 1941, compared with fr. 197,880,000 a year previously. Depreciation on plant (which is to be taken over by the Municipality on the expiration of the company's concession) amounted to fr. 4,900,000, compared with fr. 4,570,000 in 1940, so that the net profit for 1941, at fr. 37,380,000, varies but little from the 1940 net profit of fr. 37,010,000. In accordance with the Limitation of Dividends Order, the gross dividend was reduced to fr. 65.40 a share, compared with fr. 126 for 1940. There are 265,000 shares (without nominal value), and the company's share capital amounts to fr. 265,000,000; reserves total fr. 1,870,000, compared with fr. 1,850,000 at the end of the previous financial year.

## Railway and Other Reports

**San Paulo (Brazilian) Railway Co.** Ltd.—A dividend of 2 per cent. tax free is being paid on the ordinary capital for the year 1941, the same as for 1940.

**Great Western of Brazil Railway Co.** Ltd.—Payment is announced of a half-year's interest on the 4 per cent. debentures and on the 6 per cent. permanent debenture stock, both *plus* interest thereon at 4 per cent. per annum, for the half-year to June 30, 1939.

**Madras & Southern Mahratta Railway Co. Ltd.**—At a meeting of the board held on April 22, a dividend of 2½ per cent., namely, 1½ per cent. guaranteed interest, and 1 per cent. from stockholders' revenue account, was declared, payable on July 1. A similar dividend was paid on July 1, 1941.

**Rohilkund & Kumaon Railway Co.** Ltd.—For the year to September 30, 1941, net earnings of the whole system amounted to Rs. 52,91,872 (Rs. 49,70,092), and the company's share is Rs. 22,18,874 (Rs. 21,52,862), producing £184,685 net, against £177,723 net. An ad interim dividend for the half-year to March 31, 1941, *plus* a bonus of 4 per cent., on the ordinary stock was paid on July 28, and an ad interim dividend for the half-year to September 30, 1941, of 6 per cent., *plus* a bonus of 7 per cent., was paid on January 26, 1942. These payments represent a total distribution of 21 per cent. for the year on the ordinary stock. After bringing in £1,918, providing for income tax, interest on debenture and preference stocks, interim dividends and bonus, contribution to provident fund, and making other adjustments including £7,250 on account of Secretary of State's share of surplus profits, there remains £31,600, which it is proposed to carry forward. Receipts for the year increased by Rs. 8,05,585 and working expenses by Rs. 4,83,805. The operating ratio was 45·28 per cent. against 43·95 per cent.

**Bengal & North Western Railway Co. Ltd.**—Net earnings for the year to September 30, 1941, were Rs. 2,37,76,997 (Rs. 2,20,91,467), and the company's share is Rs. 1,33,11,920 (Rs. 1,23,75,949), producing £996,382 net, against £927,200. An ad interim dividend for the half-year of 4 per cent., plus a bonus of 4 per cent., on the ordinary stock was paid on July 28, and an ad interim dividend for the half-year to September 30, 1941, of 7 per cent., *plus* a bonus of 3 per cent., was paid on February 2, 1942, these payments representing a total distribution of 18 per cent. for the year. After bringing in £26,277, providing for taxes, interest on debenture and preference stocks, interim dividends and bonus, contribution to provident fund, £35,000 for sinking fund for redemption of capital in 1982, making other adjustments, and taking £81,417, being interest on reserve account, there remains £44,061 which the directors propose to carry forward. Gross earnings for the year to September 30, 1941, showed an increase of Rs. 24,59,797, working expenses an increase of Rs. 7,74,267, and net earnings an increase of Rs. 16,85,530. The operating ratio improved from 44·46 per cent. to 43·68 per cent.

**City of Oxford Motor Services Limited.**—The accounts of this company, which is associated with the Great Western Railway Company and the British Electric Traction Co. Ltd., show that the profit for the year 1941, after providing £167,000 for taxation, was £18,372. Adding £7,247

brought in makes a total available of £25,619. Of this amount £4,810 is applied to the 6½ per cent. preference dividend and £13,560 to the total ordinary dividend of 6 per cent. tax free for the year, leaving £7,249 to be carried forward.

**Birmingham & Midland Motor Omnibus Co. Ltd.**—The report of this company, which is jointly controlled by the L.M.S. and G.W. Railway Companies and by the British Electric Traction Co. Ltd., shows that the balance of the profit and loss account for the year 1941 amounted to £285,915, compared with £317,880 for 1940. After deducting £54,742 (£60,000) placed to reserve, and adding £134,929 brought forward, there is a sum available of £366,102, out of which it is proposed to apply £10,000 to employees assistance fund, £8,000 to preference dividend, £144,000 to dividend of 10 per cent., less tax, for the year on the ordinary shares, and £72,000 to a bonus of 5 per cent., less tax, on those shares, leaving £132,102 to be carried forward. The sum of £25,258 realised on the sale of certain assets has been placed direct to reserve.

**Dennis Bros. Ltd.**—The directors announce an interim dividend of 4d. a share, less tax, payable May 16.

**Switchgear & Cowans Limited.**—Profit in 1941 amounted to £27,688. The dividend is 10 per cent. (15 per cent.), and the amount to be carried forward is £8,281 (£6,480).

**Skefko Ball Bearing Co. Ltd.**—This company is the British unit of the organisation controlled by the Swedish Ball Bearing Company. Net profit for the year 1941, after providing for taxation and depreciation, is £170,599 (£180,696). A final dividend is recommended of 10½ per cent., tax free, making 17½ per cent., tax free, for the year, the same as for 1940.

**British Aluminium Co. Ltd.**—Profit for the year 1941, after taxation and depreciation service and setting aside £50,000 to depreciation reserve, and £100,000 to reserve fund, amounted to £417,332 (£408,155). Adding £194,795 brought forward makes a total available of £612,127. A final dividend of 7 per cent. is recommended on the ordinary, making 10 per cent. for the year (same), and £222,127 is carried forward.

**Craven Bros. (Manchester) Ltd.**—Trading profit for 1941 was £260,056 (£187,621). Deductions for interest charges, war risk insurance, A.R.P., depreciation reserve £15,000 (same), and provision for taxation (£160,000 against £80,000) bring the net profit to £60,161 (£73,012). The final dividend is 10 per cent. (same), making 14 per cent. for the year (same), and it is proposed to carry forward £142,720 (£126,359, before director's fees £1,800 for 1940).

**British Oxygen Co. Ltd.**—Consolidated profit for 1941, including proportion of profits of subsidiaries amounted to £1,863,352 (£1,897,508). Depreciation takes £460,061, United Kingdom income tax £181,598 (£404,228), and after deducting £76,506 for proportion of profits retained by subsidiaries there remains a profit of £808,187 (£955,469). Allocations of £500,000 are made to E.P.T., income tax, and war contingencies, leaving a net balance of £308,187 (£355,469). Preference dividends take £43,312, and the proposed final dividend is 7 per cent. (8 per cent.), making 14 per cent. less tax (15 per cent. less tax) for the year, leaving £67,478 (£54,975) to go forward.

**A. Reyrolle & Co. Ltd.**—Net profits, after taxation, for the year 1941 amounted to £165,340 (£169,471). A transfer is made of £50,000 (£60,000) to general reserve, and the directors recommend a final dividend of 7½ per cent. on the ordinary capital, again making 12½ per cent. for the year. The carry forward is £145,421 (£146,845). It is proposed to allocate £2,500 out of profits for local charitable funds and special war appeals.

## British and Irish Railway Stocks and Shares

Stocks	Highest 1941	Lowest 1941	Prices	
			April 24, 1942	Rise/ Fall
<b>G.W.R.</b>				
Cons. Ord. ....	43½	30½	42	+ ½
5% Cons. Pref. ....	109½	83½	114½	+ ½
5% Red. Pref. (1950) ....	105½	96½	108	+ ½
4% Deb. ....	113½	102½	114½	—
4½% Deb. ....	115	105½	116	—
4½% Deb. ....	121½	112	123	—
5% Deb. ....	132	122	135	—
2½% Deb. ....	70	62½	73	+ 1
5% Rt. Charge ....	129½	116	132½	—
5% Cons. Guar. ....	128	110½	129	—
<b>L.M.S.R.</b>				
Ord. ....	17½	11	18½	+ 2
4% Pref. (1923) ....	53	33½	53	+ 1
4% Pref. ....	68½	48½	72	+ 3
5% Red. Pref. (1955) ....	97½	77	99	+ 2
4% Deb. ....	105½	97	107	—
5% Red. Deb. (1952) ....	110½	106½	109½	—
4% Guar. ....	100	85½	103½	—
<b>L.N.E.R.</b>				
5% Pref. Ord. ....	38	28	38	+ 2
Def. Ord. ....	2	1½	1½	+ 2
4% First Pref. ....	52½	33	53	—
4% Second Pref. ....	19½	10	20½	+ 1
5% Red. Pref. (1955) ....	79	52	88	—
4% First Guar. ....	90	74½	96	—
4% Second Guar. ....	80	59	86½	+ 1
3% Deb. ....	79½	68½	82	—
4% Deb. ....	104	91	105½	—
5% Red. Deb. (1947) ....	106	102½	104	—
4½% Sinking Fund ....	103½	99½	103½	—
Red. Deb. ....				
<b>SOUTHERN</b>				
Pref. Ord. ....	65½	43½	63½	—
Def. Ord. ....	15½	9	15½	+ 2
5% Pref. ....	107	77½	111	—
5% Red. Pref. (1964) ....	107	89½	108	+ 1½
5% Guar. Pref. ....	128	111	129	—
5% Red. Guar. Pref. ....	114½	107½	113½	—
(1957)				
4% Deb. ....	112	102½	110½	—
5% Deb. ....	130½	119	134	—
4% Red. Deb. (1962-67) ....	108½	102	108½	—
4% Red. Deb. (1970-80) ....	108½	102½	109½	—
<b>FORTH BRIDGE</b>				
4% Deb. ....	99½	90½	103½	+ 1
4% Guar. ....	99	85½	104½	+ 1
<b>L.P.T.B.</b>				
4½% "A" ....	120½	109	120	—
5% "A" ....	130½	115½	130	—
4½% "T.F.A." ....	103½	99½	102	—
5% "B" ....	117	102	118	—
"C" ....	46½	28½	40½	—
<b>MERSEY</b>				
Ord. ....	24½	19½	21½	—
4% Perp. Deb. ....	100	90	100	—
3% Perp. Deb. ....	73½	63	77	—
3% Perp. Pref. ....	58	51½	58	—
<b>IRELAND</b>				
BELFAST & C.D. Ord. ....	4	4	9	—
G. NORTHERN Ord. ....	14½	3	22	+ 3
G. SOUTHERN Ord. ....	14½	5	15	—
Pref. ....	17	10	21	+ 3
Guar. ....	44	16	43	+ 3
Deb. ....	61	42	65	+ 5

£ ex-dividend

## Railway Stock Market

With the stock and share markets disposed to take a more encouraging view of the war situation, firm conditions have obtained in most groups of securities, despite the absence of any general improvement in the volume of business. Contrary to the prevailing experience, home railway stocks have been strong and active under the lead of the ordinary and preference securities, which in some instances have now reached higher levels than those ruling early in 1940 after publication of the initial terms of the financial agreement with the Government. Sentiment has benefited from the psychological effect of the White Paper issued last week, which showed that the extent of the wartime sacrifice made by the railways and the stockholders has been much in excess of general estimates. In round figures, net revenue for 1941 was over £65 millions, compared with the rental of £43½ millions paid to the railways under the agreement. There can, of course, be no question of a revision of the agreement at this stage on terms which would permit of more equitable division of profits to stockholders. On the other hand, the substantial earning power of the railways, which is likely to be maintained during the period of the war, has drawn still wider recognition to the large

and generous yields obtainable on railway junior stocks. The high level of earnings has also had the effect of emphasising the justice of the expectation that in any negotiations with the authorities after the war, due consideration will be given to the right of the railways to earn standard revenue of an aggregate of £56 millions under the Railways Act, 1921.

On the basis of earnings at this level, dividends of approximately 8 per cent. would be possible on both Great Western and L.M.S.R. ordinary, 3½ per cent. on Southern deferred, 5 per cent.

	1940	1941	Current price	Div.	%
Great Western Ord.	52	43½	42½	4	
L.M.S.R. Ord.	24½	17½	19½	2	
" 1st Pref.	70½	68½	73	4	
" 1923 Pref.	60½	53	54½	4	
Southern Pfd.	79	65½	64½	5	
" Dfd.	22½	15½	16½	1½	
L.N.E.R. 2nd Pref.	22½	19½	21½	2½	
" Pfd.	8½	3½	4½	Nil	
" Dfd.	4½	2	2½	Nil	

on L.N.E.R. preferred, and 4½ per cent. on L.N.E.R. deferred. No dividends were distributed last year on L.N.E.R. preferred and deferred, and they cannot be expected to receive a payment under the wartime rental agreement, to the large

although in some quarters there are hopes that a slightly better distribution may be possible on this railway's second preference stock. The table shows highest prices touched by junior stocks in the past two years, together with the levels ruling at the time of writing.

Compared with a week ago, Great Western ordinary has risen from 41½ to 42½ under the influence of the White Paper. As in most other instances, there was rather less activity in debenture stocks, which remained very firmly held and were in small supply. L.M.S.R. ordinary has risen on balance from 18 to 19½, the 1923 preference from 52½ to 54½, and the senior preference from 72 to 73. Speculative buying has resulted in L.N.E.R. preferred and deferred stocks improving to 4½ and 2½ respectively. The first preference rose to 54½ and the second preference to 21½. Southern preferred moved up from 63 to 64½, and the deferred was 16½, compared with 15 a week ago. London Transport "C" was fractionally better at 40½.

Where changed, the majority of movements in South American railway securities were in favour of holders, but little business was reported. Entre Rios issues responded to the debenture interest announcement, but San Paulo failed to benefit from the dividend. Canadian Pacifics were less active.

Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

Railways	Miles open 1941-42	Week Ending	Traffic for Week			No. of Weeks	Aggregate Traffics to date			Shares or Stock	Prices		
			Total this year		Inc. or Dec. compared with 1941		Totals		Increase or Decrease		Highest 1941	Lowest 1941	April 24, 1942
			This Year	Last Year			This Year	Last Year					Yield % (See Note)
Antofagasta (Chili) & Bolivia	834	19.4.42	£ 23,580	+ £ 6,100	16	£ 333,770	£ 277,600	+ £ 56,170	Ord. Stk.	10½	3½	9½	Nil
Argentine North Eastern	753	18.4.42	ps. 217,600	+ ps. 74,400	16	ps. 7,343,800	ps. 6,123,200	+ ps. 1,220,600	6 p.c. Deb.	4	5	5	NII
Bolivar	174	Mar., 1942	4,556	+ 216	13	14,128	11,020	+ 3,108	Bonds	8	2½	10½	NII
Brazil	...	...	...	...	...	...	...	...	Ord. Stk.	7½	1½	4½	NII
Buenos Ayres & Pacific	2,801	18.4.42	ps. 1,665,000	- ps. 45,000	42	ps. 60,471,000	ps. 59,579,000	+ ps. 892,000	Ord. Stk.	10½	3½	8½	NII
Buenos Ayres Great Southern	5,080	18.4.42	ps. 2,655,000	+ ps. 366,000	42	ps. 102,699,000	ps. 92,831,000	+ ps. 9,868,000	Ord. Stk.	10½	3½	8½	NII
Buenos Ayres Western	1,930	18.4.42	ps. 827,000	- ps. 91,000	42	ps. 35,774,000	ps. 32,092,000	+ ps. 3,682,000	Ord. Stk.	9½	2½	7	NII
Central Argentine	3,700	18.4.42	ps. 1,717,500	- ps. 343,500	42	ps. 75,680,750	ps. 66,696,250	+ ps. 6,984,500	Ord. Stk.	8½	2½	6	NII
Do	...	...	...	...	...	...	...	...	Dfd.	2½	1½	3½	NII
Cent. Uruguay of M. Video	972	18.4.42	31,136	+ 5,805	42	1,039,641	948,510	+ 91,131	Ord. Stk.	9½	1	6	NII
Costa Rica	262	Mar., 1942	20,547	+ 4,519	38	201,023	177,738	+ 23,285	Stk.	15½	11½	13	NII
Dorada	70	Mar., 1942	12,300	- 200	13	33,484	36,700	- 3,216	1 Mt. Db.	9½	97	904	6½
Entre Rios	808	18.4.42	ps. 309,200	+ ps. 107,600	42	ps. 10,742,200	ps. 8,945,800	+ ps. 1,796,400	Ord. Stk.	6½	½	5	NII
Great Western of Brazil	1,030	18.4.42	9,300	+ 1,300	16	172,000	170,200	+ 1,800	Ord. Sh.	11½	1½	8	Nil
International of Cl. Amer.	1,030	18.4.42	1,300	- 1,300	16	172,000	170,200	+ 1,800	Ord. Sh.	11½	1½	8	Nil
Interoceanic of Mexico	794	Feb., 1942	£ 154,927	+ £ 81,080	8	£ 333,440	£ 184,198	+ £ 149,242	1st Pref.	8	6d.	½	Nil
La Guaira & Caracas	224	Mar., 1942	7,470	+ 1,950	13	19,860	18,995	+ 865	1st Pref.	8	6d.	½	Nil
Leopoldina	1,918	18.4.42	26,979	+ 5,841	16	467,002	378,245	+ 88,757	Ord. Stk.	4	½	4	NII
Mexican	483	18.4.42	ps. 136,100	+ ps. 13,700	15	ps. 1,136,000	ps. 4,711,400	+ ps. 424,600	Ord. Stk.	4	½	3½	NII
Midland of Uruguay	319	Feb., 1942	12,418	+ 337	34	107,017	94,688	+ 12,329	Ord. Stk.	15½	11½	3½	NII
Nitrate	386	15.4.42	5,805	+ 1,560	15	41,705	30,977	+ 10,728	Ord. Sh.	66½	1½	3½	NII
Paraguay Central	274	18.4.42	£ 4,531,000	+ £ 1,945,000	42	£ 146,061,000	£ 136,112,000	+ £ 9,949,000	Pr. Lt. Stk.	43½	29	42½	14½
Peruvian Corporation	1,059	Mar., 1942	89,692	+ 28,663	39	671,716	577,986	+ 93,730	Pref.	6½	1½	7	NII
Salvador	100	Feb., 1942	c 57,000	+ c 52,000	34	c 656,172	c 507,683	+ c 148,489	Ord. Stk.	52	24½	44½	4½
San Paulo	153½	19.4.42	32,608	+ 2,854	16	543,650	552,294	+ 8,644	Ord. Stk.	I	6½	17½	NII
Tatral	160	Mar., 1942	3,900	+ 1,270	39	39,015	25,140	+ 13,875	Ord. Sh.	24	½	3	3
United of Havana	1,346	18.4.42	65,252	+ 24,957	42	1,221,503	975,082	+ 246,421	Ord. Stk.	—	—	—	—
Uruguay Northern	73	Feb., 1942	954	+ 51	34	9,900	9,154	+ 746	—	—	—	—	—
Canada	23,562	21.4.42	1,266,600	+ 107,200	16	19,771,600	16,286,800	+ 3,484,800	Ord. Stk.	13½	7½	11	NII
Canadian Pacific	17,139	21.4.42	955,200	+ 230,400	16	14,285,800	11,296,000	+ 2,989,800	Ord. Stk.	—	—	—	—
India	Barsi Light	202	Jan., 1942	11,805	- 3,525	45	137,482	135,210	+ 2,272	—	—	—	—
Bengal & North Western	2,090	Mar., 1942	267,150	- 9,167	26	1,637,135	1,589,900	+ 48,235	Ord. Stk.	34½	25½	33½	5½
Bengal-Na Spur	3,267	20.1.42	279,900	+ 28,764	43	7,860,240	7,124,397	+ 735,843	Stk.	101	95½	90	4½
Madras & Southern Mahratta	2,939	10.2.42	203,625	+ 19,725	47	5,266,920	6,223,640	+ 956,720	—	105½	101½	93½	8½
Rohilkund & Kumaon	571	Mar., 1942	59,925	- 11,425	26	326,689	357,677	- 30,988	—	342	290	342½	3½
South Indian	2,402	20.1.42	134,249	+ 18,493	43	4,273,558	3,670,793	+ 602,765	—	100	87	91	3½
Various	Bairas	204	Feb., 1942	80,141	-	21	368,472	—	—	—	—	—	—
Egyptian Delta	610	20.1.42	12,496	+ 3,975	43	272,885	194,988	+ 77,897	Prf. Sh.	1½	29/-	2½	Nil
Manila	—	—	—	—	—	—	—	—	B. Deb.	68	45	30	11½
Midland of W. Australia	227	Nov., 1941	21,710	+ 5,994	17	103,592	78,885	+ 24,707	Inc. Deb.	90½	85½	89½	5½
Nigerian	1,900	Jan., 1942	71,391	+ 25,823	43	2,557,812	1,834,363	+ 723,449	—	—	—	—	—
Rhodesia	2,442	Feb., 1942	473,307	-	21	2,373,268	—	—	—	—	—	—	—
South Africa	13,291	14.3.42	814,746	+ 48,738	50	38,403,766	34,808,803	+ 3,593,963	—	—	—	—	—
Victoria	4,774	Dec., 1941	1,250,508	+ 240,622	25	6,627,999	5,615,574	+ 1,012,475	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of ½.  
Receipts are calculated at 1s. 6d. to the rupee. Argentine traffics are given in pesos  
\$ ex dividend